

GenCore version 5.1.6
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OM protein - protein search, using sv model
Run on: October 15, 2003, 10:33:21 / Search time 61.4918 Seconds
(without alignments)
80.019 Million cell updates/sec
Title: US-09-719-410-3
Perfect score: 161
Sequence: 1 HAEGRFDVSSVLESCAAKEFIAWLKGRG 31
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5
Searched: 1107863 seqs, 158726573 residues
Total number of hits satisfying chosen parameters: 1107863
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Length	DB ID	Description
1	161	100.0	31 8 AAP71072	Insulinotropic pep
2	161	100.0	31 11 AAR07397	Glucagon-like pept
3	161	100.0	31 12 AAR13420	Glucagon-like pept
4	161	100.0	31 12 AAR13422	Glucagon-like pept
5	161	100.0	31 12 AAR13423	Glucagon-like pept
6	161	100.0	31 14 AAR42668	Glucagon-like pept
7	161	100.0	31 15 AAR45434	Insulinotropin der
8	161	100.0	31 15 AAR63246	Insulinotropin (GL
9	161	100.0	31 16 AAR75885	Glucagon like pept

10	161	100.0	31 16 AAR69065	Glucagon like pept
11	161	100.0	31 17 AAW03851	Glucagon like pept
12	161	100.0	31 17 AAW03907	Glucagon like pept
13	161	100.0	31 17 AAW03929	Glucagon like pept
14	161	100.0	31 17 AAW03899	Glucagon like pept
15	161	100.0	31 17 AAW03865	Glucagon like pept
16	161	100.0	31 17 AAW03866	Glucagon like pept
17	161	100.0	31 17 AAW03867	Glucagon like pept
18	161	100.0	31 17 AAW03853	Glucagon like pept
19	161	100.0	31 17 AAW03854	Glucagon like pept
20	161	100.0	31 17 AAW03855	Glucagon like pept
21	161	100.0	31 18 AAW24389	Glucagon-like pept
22	161	100.0	31 19 AAW63287	Glucagon-like pept
23	161	100.0	31 19 AAW63183	GLP-1(7-37). Homo
24	161	100.0	31 19 AAW63195	GLP-1(7-37). Synt
25	161	100.0	31 19 AAW50902	Glucagon-like pept
26	161	100.0	31 20 AAY80306	Glucagon peptide-1
27	161	100.0	31 20 AAY42936	Glucagon-like pept
28	161	100.0	31 20 AAY27375	Glucagon-like pept
29	161	100.0	31 20 AAY39772	Glucagon-like pept
30	161	100.0	31 20 AAY39810	Glucagon-like pept
31	161	100.0	31 20 AAY34199	GLP-1 mutant pepti
32	161	100.0	31 20 AAY22165	GLP-1-like peptide
33	161	100.0	31 21 AAR18036	GLP-1(7-37)OH pept
34	161	100.0	31 21 AAR21328	GLP-1(7-37) Peptid
35	161	100.0	31 21 AAR21339	Human glucagon-lik
36	161	100.0	31 21 AAR21109	Human glucagon-lik
37	161	100.0	31 21 AAY53277	Glucagon-like pept
38	161	100.0	31 21 AAY78950	Glucagon-like pept
39	161	100.0	31 21 AAY67372	Glucagon-like pept
40	161	100.0	31 22 AAU07374	Mammalian glucagon
41	161	100.0	31 22 AAR09251	Human glucagon-lik
42	161	100.0	31 22 AAG63268	Amino acid sequenc
43	161	100.0	31 22 AAR82235	Glucagon-like pept
44	161	100.0	31 22 AAR49594	Glucagon-like pept
45	161	100.0	31 22 AAR60248	Glucagon-like pept

ALIGNMENTS

RESULT 1
AAP71072
ID AAP71072 standard; peptide; 31 AA.
XX AC AAP71072;
XX AC
XX DT 25-MAR-2003 (updated)
XX DT 03-OCT-2002 (updated)
XX DT 02-MAY-1991 (first entry)
XX Insulinotropic peptide comprising GLP-1 residues 7-37.
XX insulintropic; glucagon like peptide; GLP-1; diabetes mellitus.
XX OS Homo sapiens.
XX PN W08705941-A.
XX PD 19-NOV-1987.
XX PF 05-MAY-1987; 87MO-7001005.
XX PR 05-MAY-1986; 86US-0859928.
XX (GCHO) GEN HOSPITAL CORP.
XX Habener J;
XX WPI, 1987-334950/47.
XX New peptide derives. - increase insulin prodn. from beta islet
XX cells, comprise fragment of glucagon like peptide

XX 29-OCT-1991 (first entry)
XX
XX Glucagon-like peptide-1 (A)8-GLP-1(7-37).
XX
XX Glucagon; insulin; diabetes; degradation; islet cells.
XX
XX Synthetic.
XX Key Location/Qualifiers
XX Modified-site 2
XX /label= D-Ala
XX
XX WO9111457-A.
XX
XX 08-AUG-1991.
XX
XX 24-JAN-1991; 91WO-US00500.
XX
XX 24-JAN-1990; 90US-0468736.
XX
XX (BUCK/) BUCKLEY D I.
XX
XX Buckley DI, Habener JF, Mallory JB, Mojsov S;
XX WPI; 1991-252609/34.
XX
XX New glucagon-like peptide-1 (GLP-1) analogues - have increased
XX insulin-stimulating activity and/or resistance to degradation in
XX vivo
XX
XX Claim 7; Page 37; 50pp; English.
XX
XX The peptides represented in AAR13420-27 are more powerful than glucagon
XX in stimulating insulin release from islet cells and some of them are
XX also more resistant to degradation in the plasma. Doses are usually
XX 1 picog-lng/kg, for the treatment of diabetes Type II.
XX The last three amino acids may sequentially be omitted.
XX
XX Sequence 31 AA;
XX
XX Query Match 100.0%; Score 151; DB 12; Length 31;
XX Best Local Similarity 100.0%; Pred. No. 2.2e-16;
XX Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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XX 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31
XX
XX 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31
XX
XX
XX RESULT 5
XX AAR13423
XX ID AAR13423 standard; Protein; 31 AA.
XX
XX AC AAR13423;
XX
XX 29-OCT-1991 (first entry)
XX
XX Glucagon-like peptide-1 (E)9-GLP-1(7-37).
XX
XX Glucagon; insulin; diabetes; degradation; islet cells.
XX
XX Synthetic.
XX Key Location/Qualifiers
XX Modified-site 3
XX /label= D-Glu
XX
XX WO9111457-A.
XX
XX 08-AUG-1991.
XX
XX 24-JAN-1991; 91WO-US00500.
XX

XX 24-JAN-1990; 90US-0468736.
XX
XX (BUCK/) BUCKLEY D I.
XX
XX Buckley DI, Habener JF, Mallory JB, Mojsov S;
XX WPI; 1991-252609/34.
XX
XX New glucagon-like peptide-1 (GLP-1) analogues - have increased
XX insulin-stimulating activity and/or resistance to degradation in
XX vivo
XX
XX Claim 7; Page 37; 50pp; English.
XX
XX The peptides represented in AAR13420-27 are more powerful than glucagon
XX in stimulating insulin release from islet cells and some of them are
XX also more resistant to degradation in the plasma. Doses are usually
XX 1 picog-lng/kg, for the treatment of diabetes Type II.
XX The last three amino acids may sequentially be omitted.
XX
XX Sequence 31 AA;
XX
XX Query Match 100.0%; Score 161; DB 12; Length 31;
XX Best Local Similarity 100.0%; Pred. No. 2.2e-16;
XX Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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XX 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31
XX
XX 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31
XX
XX
XX RESULT 6
XX AAR42668
XX ID AAR42668 standard; peptide; 31 AA.
XX
XX AC AAR42668;
XX
XX 25-MAR-2003 (updated)
XX 26-APR-1994 (first entry)
XX
XX Glucagon-like peptide (GLP-1(7-37)).
XX
XX Glucagon-like peptide; GLP; phospholipid;
XX diocctanoyl-L-alpha-phosphatidylcholine; diabetes;
XX dilauroyl-L-alpha-phosphatidylcholine; insulinotropic agent.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
XX FT Misc-difference 31
XX /note= "gly31 may be omitted, in which case the
XX C-terminal is amidated"
XX
XX WO9318785-A1.
XX
XX 30-SEP-1993.
XX
XX 18-MAR-1993; 93WO-DK00098.
XX
XX 19-MAR-1992; 92DK-0000364.
XX
XX (NOVO) NOVO-NORDISK AS.
XX
XX Kirk O, Pridal L;
XX WPI; 1993-320450/40.
XX
XX Medicament for treatment of diabetes - contains glucagon-like
XX peptide and phospholipid for intranasal admin.
XX
XX Claim 1; Page 18; 24pp; English.
XX

7

DE Glucagon like peptide-1(7-36), (7-36)amide and (7-37).
XX
KW Glucagon like peptide-1; GLP-1; (7-36); (7-36)amide; (7-37);
XX type 2 diabetes; treatment.
XX
CS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 36
FT Misco-difference 37 /note= "may be amidated when Gly 31 is absent"
FT /note= "may be absent"
XX
XX
PN W09517510-A1.
XX
XX 29-JUN-1995.
XX
XX 22-DEC-1994; 94WO-DK00487.
XX
XX 23-DEC-1993; 93DK-0001440.
XX
XX (NOVO) NOVO-NORDISK AS.
XX
XX Bjorn SE, Rasmussen JS, Thim L;
XX WPI; 1995-240671/31.
XX
XX Prodn. of glucagon-like peptide-1 (7-36) - using transformed
FT bacteria contg. 2 or more consecutive DNA sequences coding for GLP-1
FT (7-36)
XX
XX
PS Claim 1; Page 1; 27pp; English.
XX
XX AAR75885 is the glucagon like peptide-1 (GLP-1) amino acids 7-36, the
CC featured derivs. GLP-1(7-36)amide and GLP-1(7-37) are also given in
CC the claims. The peptide and its derivs. can be used for the treatment
CC of type 2 diabetes.
XX
SQ Sequence 31 AA;

Query Match 100.0%; Score 161; DB 16; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.2e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETFTSDVSSYLEGQAARKEFTAWLVKRG 31
|||||
DB 1 HAEGETFTSDVSSYLEGQAARKEFTAWLVKRG 31

RESULT 10
AAR69065
ID AAR69065 standard; peptide; 31 AA.
XX
AC AAR69065;
XX
DT 25-MAR-2003 (updated)
DT 23-AUG-1995 (first entry)
XX
XX Glucagon like peptide 1 (GLP1) (7-36)-Gly.
XX
KW Glucagon like Peptide; GLP; transpeptidation; endopeptidase;
KW Trypsin; thrombin; cleavage.
XX
OS Synthetic.
XX
XX W09503405-A2.
PN
XX
XX 02-FEB-1995.
PD
XX 19-JUL-1994; 94WO-US08125.
PF
XX 20-JUL-1993; 93US-0095162.
PR
XX

PA (BION-) BIONEERASKA INC.
XX
XX Henriksen D, Manning S, Partridge B, Stout J, Wagner FW;
XX WPI; 1995-075233/10.
DR
XX
XX Transpeptidation of recombinant polypeptides - using
FT endopeptidase such as trypsin or thrombin to modify C-terminal
FT residue.
XX
XX Claim 34; Page 13; 69pp; English.
XX
XX The naturally occurring sequence of Glucagon Like Peptide 1 (GLP1)
CC is AAR69072. It is a 36 AA peptide that has been recombinantly
CC produced but without a mechanism for providing for the amidation of
CC the C-terminal Arg residue. Amidated recombinant GLP1 (7-36)NH2
CC (AAR69063) was prepd. from a multicopy fusion protein contg. four
CC copies of a modified truncated GLP peptide having AA residues 7-34
CC of the native polypeptide and the terminal AA residues A-F-A at
CC residues 35-37 (GLP1 (7-34)-A-F-A) (AAR69064). The recombinant GLP1 (7-
CC 34)-A-F-A can be transpeptidated to yield the modified recombinant
CC native GLP1 (7-36)-NH2 (AAR69063) as follows. Trypsin was used to
CC cleave the peptide at the Lys-Ala bond in the presence of either
CC Gly-Arg-NH2 or Gly-Arg-Gly addition units so that the cleavage of
CC the Ala-Phe-Arg leaving unit is followed by the addition of
CC Gly-Arg-NH2 or Gly-Arg-Gly to the core GLP1 (7-34) to yield either
CC amidated 7-36 GLP1-NH2 or GLP1 7-36 with a terminal Gly (AAR69065).
CC (Updated on 23-MAR-2003 to correct FN field.)
XX
XX Sequence 31 AA;

Query Match 100.0%; Score 161; DB 16; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.2e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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|||||
DB 1 HAEGETFTSDVSSYLEGQAARKEFTAWLVKRG 31

RESULT 11
AAR69065
ID AAR69065 standard; peptide; 31 AA.
XX
AC AAR69065;
XX
DT 25-MAR-2003 (updated)
DT 14-APR-1997 (first entry)
XX
XX Glucagon like peptide 1 (7-37) analogue D-His7.
XX
KW Human; glucagon like peptide; GLP-1; analogue; stimulation;
KW Pancreas; insulin; islet cell; treatment; type II diabetes;
KW degradation; resistant.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FT Misco-difference 1 /note= "D-form residue"
FT
XX US5545618-A.
PN
XX 13-AUG-1996.
PD
XX 10-DEC-1993; 93US-0165516.
PF
XX 20-SEP-1991; 91US-0762768.
PR 24-JAN-1990; 90US-0468736.
PR 10-DEC-1993; 93US-0165516.
XX
XX (BUCK/) BUCKLEY D I.
PA (HABE/) HABENER J F.
PA

PA (WALL/) MALLORY J B.
PA (MOJS/) MOJSOV S.
XX
XX
PI Buckley DI, Habener JF, Mallory JB, McJsoy S;
XX
XX WPI; 1996-383697/38.
XX
XX New modified glucagon-like peptide I fragments - have higher
PT activity than glucagon or have improved plasma stability, useful for
PT treating type II diabetes
XX
XX Claim 14; page -; 16pp; English.
XX
XX The present peptide is a human glucagon like peptide 1 (GLP-1)
CC analogue, which is useful for stimulating insulin release from
CC pancreatic islet cells, especially in the treatment of type II
CC diabetes at doses of 1 pg/kg to 1 mg/kg. This peptide has better
CC resistance to degradation in plasma than GLP-1(7-37), and has a
CC higher activity than glucagon, as exemplified by the results of an
CC adenylate cyclase assay where the peptide had an ED50 of 1.1 nM,
CC compared to 0.16 nM for GLP-1(7-37) and 80 nM for glucagon.
CC (Updated on 25-MAR-2003 to correct PF field.)
XX
XX Sequence 31 AA;
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Query Match 100.0%; Score 161; DB 17; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.2e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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DB 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGRG 31
|||||
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ID AAW03907 standard; peptide; 31 AA.
XX
XX
AC AAW03907;
XX
XX 25-MAR-2003 (updated)
DT 15-APR-1997 (first entry)
XX
XX Glucagon like peptide 1 (7-37) analogue D-Lys34.
DE
XX Human; glucagon like peptide; GLP-1; analogue; stimulation;
KW pancreas; insulin; islet cell; treatment; type II diabetes.
KW
XX Homo sapiens.
XX
XX Key Location/Qualifiers
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FT Misc-difference 28 /note= "D-form residue"
FT Misc-difference 29 /note= "D-form residue"
FT Misc-difference 29 /note= "optionally absent when Arg30 and Gly31 are
FT Misc-difference 29 /note= "absent"
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PN US5545618-A.
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XX 13-AUG-1996.
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XX 10-DEC-1993; 93US-0165516.
XX
XX 20-SEP-1991; 91US-0762768.
XX 24-JAN-1990; 90US-0468736.
XX 10-DEC-1993; 93US-0165516.
XX
XX (BUCK/) BUCKLEY D I.
PA (HABE/) HABENER J F.
PA (WALL/) MALLORY J B.
PA (MOJS/) MOJSOV S.
XX

PA (WALL/) MALLORY J B.
PA (MOJS/) MOJSOV S.
XX
XX Buckley DI, Habener JF, Mallory JB, McJsoy S;
XX
XX WPI; 1996-383697/38.
XX
XX New modified glucagon-like peptide I fragments - have higher
PT activity than glucagon or have improved plasma stability, useful for
PT treating type II diabetes
XX
XX Example 1; page -; 16pp; English.
XX
XX The present peptide is a specific example of a claimed human
CC glucagon like peptide 1 (GLP-1) analogue, which is useful for
CC stimulating insulin release from pancreatic islet cells, especially
CC in the treatment of type II diabetes at doses of 1 pg/kg to
CC 1 mg/kg.
CC (Updated on 25-MAR-2003 to correct PF field.)
XX
XX Sequence 31 AA;
SQ
Query Match 100.0%; Score 161; DB 17; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.2e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGRG 31
|||||
DB 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGRG 31
|||||
RESULT 13
AAW03929
ID AAW03929 standard; peptide; 31 AA.
XX
XX
AC AAW03929;
XX
XX 25-MAR-2003 (updated)
DT 15-APR-1997 (first entry)
XX
XX Glucagon like peptide 1 (7-37) analogue D-Arg36.
DE
XX Human; glucagon like peptide; GLP-1; analogue; stimulation;
KW pancreas; insulin; islet cell; treatment; type II diabetes.
KW
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FH
FT Misc-difference 30 /note= "D-form residue"
FT Misc-difference 29 /note= "optionally absent when Arg30 and Gly31 are
FT Misc-difference 29 /note= "absent"
FT Misc-difference 30 /note= "optionally absent when Gly31 is absent"
FT Misc-difference 31 /note= "optionally absent"
FT Misc-difference 31 /note= "optionally absent"
PN US5545618-A.
XX
XX 13-AUG-1996.
PD
XX
XX 10-DEC-1993; 93US-0165516.
XX
XX 20-SEP-1991; 91US-0762768.
XX 24-JAN-1990; 90US-0468736.
XX 10-DEC-1993; 93US-0165516.
XX
XX (BUCK/) BUCKLEY D I.
PA (HABE/) HABENER J F.
PA (WALL/) MALLORY J B.
PA (MOJS/) MOJSOV S.
XX

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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:51:07 ; Search time 20.3279 Seconds
(without alignments)
64.524 Million cell updates/sec

Title: US-09-719-410-3
Perfect score: 161
Sequence: 1 HANGTFTSDVSYLEGQAKKEFIAMLVKGRG 31

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents_AA*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	161	100.0	31	1	US-08-095-162-3
2	161	100.0	31	1	US-08-470-220A-3
3	161	100.0	31	3	US-08-967-374-3
4	161	100.0	31	3	US-08-961-405A-1
5	161	100.0	31	3	US-08-915-918A-1
6	161	100.0	31	3	US-08-302-596-3
7	161	100.0	31	3	US-08-472-349-2
8	161	100.0	31	4	US-08-623-6188-2
9	161	100.0	31	4	US-08-333-415-3
10	161	100.0	31	4	US-08-209-799D-1
11	161	100.0	31	4	US-08-505-991-3
12	161	100.0	31	4	US-08-303-016-3
13	161	100.0	31	4	US-08-657-332A-2
14	161	100.0	31	4	US-08-614-847-124
15	161	100.0	31	4	US-08-997-792A-1
16	161	100.0	31	4	US-08-805-507-3
17	161	100.0	31	4	US-08-585-186A-1
18	161	100.0	37	1	US-08-095-162-19
19	161	100.0	37	1	US-08-470-220A-19
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21	161	100.0	37	3	US-08-302-596-1
22	161	100.0	37	3	US-08-472-349-1
23	161	100.0	37	4	US-08-623-6188-1
24	161	100.0	37	4	US-08-333-415-1
25	161	100.0	37	4	US-08-505-991-19
26	161	100.0	37	4	US-08-303-016-1
27	161	100.0	37	4	US-08-657-332A-1

Sequence 1, Appli
Sequence 18, Appl
Sequence 18, Appl
Sequence 56, Appl
Sequence 58, Appl
Sequence 61, Appl
Sequence 73, Appl
Sequence 12, Appl
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Sequence 2, Appli
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Sequence 3, Appli
Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-08-095-162-3
; Sequence 3, Application US/08095162
; Patent No. 5512459
; GENERAL INFORMATION:
; APPLICANT: Wagner, Fred W.
; APPLICANT: Stout, Jay
; APPLICANT: Henriksen, Dennis
; APPLICANT: Partidge, Bruce
; APPLICANT: Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; TITLE OF INVENTION: Recombinant Polypeptides
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 No. 5512459west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION NUMBER: US/08/095,162
; FILING DATE: 20-JUL-1993
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, Albin J.
; REGISTRATION NUMBER: 28,659
; REFERENCE/DOCKET NUMBER: 8648.32-US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 31 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; IMMEDIATE SOURCE:
; CLONE: GLP1 (7-36)-Gly
US-08-095-162-3

Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 9,9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 2
US-08-470-220A-3
; Sequence 3, Application US/08470220A
; Patent No. 5707826
; GENERAL INFORMATION:
; APPLICANT: Stout, Jay Dennis
; APPLICANT: Henriksen, Bruce
; APPLICANT: Partridge, Bruce
; APPLICANT: Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; RECOMBINANT POLYPEPTIDES
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESS: Merchant & Gould
; STREET: 3100 No. 5707826west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/470/220A
; FILING DATE: 06-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/095,162
; FILING DATE: 20-JUL-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, Albin J.
; REGISTRATION NUMBER: 28,659
; REFERENCE/DOCKET NUMBER: 8648.32-US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 31 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; IMMEDIATE SOURCE:
; CLONE: GLP1 (7-36)-Gly
US-08-470-220A-3

Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 3
US-08-967-374-3
; Sequence 3, Application US/08967374
; Patent No. 6037143
; GENERAL INFORMATION:
; APPLICANT: Stout, Jay
; APPLICANT: Henriksen, Dennis
; APPLICANT: Partridge, Bruce
; APPLICANT: Manning, Shane
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; TITLE OF INVENTION: Enzymatic Method for Modification of
; RECOMBINANT POLYPEPTIDES
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESS: Merchant & Gould
; STREET: 3100 No. 6037143west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/967,374
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/520,485
; FILING DATE: 29-AUG-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Carter, Charles G.
; REGISTRATION NUMBER: 35,093
; REFERENCE/DOCKET NUMBER: 8648.32-US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 31 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; IMMEDIATE SOURCE:
; CLONE: GLP1 (7-36)-Gly
US-08-967-374-3

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 4
US-08-961-405A-1
; Sequence 1, Application US/08961405A
; Patent No. 6191102
; GENERAL INFORMATION:
; APPLICANT: Dimarchi, Richard D.
; APPLICANT: Bfendic, Suad
; TITLE OF INVENTION: USE OF GLP-1 ANALOGS AND DERIVATIVES
; ADMINISTERED PERIPHERALLY IN REGULATION OF OBESITY
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESS: Barnes & Thornburg
; STREET: 200 W. Madison, Suite 2601
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/961,405A
; FILING DATE: 30-OCT-1997
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/030,213
; FILING DATE: 05-NOV-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Martin, Alice O.
; REGISTRATION NUMBER: 35,601
; REFERENCE/DOCKET NUMBER: 3051/90264
; TELEPHONE: 312-357-1313
; TELEFAX: 312-759-5646
; INFORMATION FOR SEQ ID NO: 1:
; LENGTH: 31 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-961-405A-1

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

RESULT 5
US-08-915-918A-1
; Sequence 1, Application US/08915918A
; Patent No. 6277819
; GENERAL INFORMATION:
; APPLICANT: Eficidic, Suad
; TITLE OF INVENTION: USE OF GLP-1 OR ANALOGS IN TREATMENT OF
; TITLE OF INVENTION: MYOCARDIAL INFARCTION
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BRINKS, HOFER, GILSON & LIONE
; STREET: NBC Tower - Suite 3600, 455 N. Cityfront
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60611-5599
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/915,918A
; FILING DATE: 21-AUG-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Martin, Alice O.
; REGISTRATION NUMBER: 35,601
; REFERENCE/DOCKET NUMBER: 8792/28
; TELEPHONE: 312-321-4200
; TELEFAX: 312-321-4299
; INFORMATION FOR SEQ ID NO: 1:
; LENGTH: 31 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-915-918A-1

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/030,213
; FILING DATE: 05-NOV-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Martin, Alice O.
; REGISTRATION NUMBER: 35,601
; REFERENCE/DOCKET NUMBER: 3051/90264
; TELEPHONE: 312-357-1313
; TELEFAX: 312-759-5646
; INFORMATION FOR SEQ ID NO: 1:
; LENGTH: 31 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-961-405A-1

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

RESULT 6
US-09-302-596-3
; Sequence 3, Application US/09302596
; Patent No. 6284725
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; APPLICANT: Ehlers, Mario R.W.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; TITLE OF INVENTION: Ischemic and Reperused Tissue
; FILE REFERENCE: P03660U51
; CURRENT APPLICATION NUMBER: US/09/302,596
; PRIOR FILING DATE: 1999-04-30
; PRIOR FILING DATE: 1998-10-08
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-3

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

RESULT 7
US-08-472-349-2
; Sequence 2, Application US/08472349
; Patent No. 6284727
; GENERAL INFORMATION:
; APPLICANT: Kim, Yesook
; APPLICANT: Lambert, William J.
; APPLICANT: Qi, Hong
; APPLICANT: Gelfand, Robert A.
; APPLICANT: Geoghegan, Kieran P.
; APPLICANT: Danley, Dennis E.
; TITLE OF INVENTION: Prolonged Delivery of Peptides
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Pfizer Inc
; STREET: 235 East 42nd Street, 20th Floor
; CITY: New York
; STATE: New York
; COUNTRY: U.S.A.
; ZIP: 10017-5755
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/472,349
; FILING DATE:
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; PRIOR APPLICATION NUMBER: US/08/181,655
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Sheyda, Robert F.
; REGISTRATION NUMBER: 31,304
; REFERENCE/DOCKET NUMBER: PC8391
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TELECOMMUNICATION INFORMATION:

TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
TELEX: N/A

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 31 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

HYDROPHILIC: NO

ANTI-SENSE: NO N-terminal

FRAGMENT TYPE: N-terminal

ORIGINAL SOURCE:

ORGANISM: N/A

STRAIN: N/A

INDIVIDUAL ISOLATE: N/A

HAPLOTYPE: N/A

CELL LINE: N/A

IMMEDIATE SOURCE:

LIBRARY: N/A

CLONE: N/A

POSITION IN GENOME:

CHROMOSOME/SEGMENT: N/A

MAP POSITION: N/A

UNITS: N/A

US-08-472-349-2

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKRG 31

DB 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKRG 31

RESULT 8

US-09-623-618B-2

Sequence 2, Application US/09623618B

Patent No. 6329336

GENERAL INFORMATION:

APPLICANT: Bridon, Dominique P.

APPLICANT: L'Archeveque, Benoit

APPLICANT: Ezrin, Alan M.

APPLICANT: Holmes, Darren I.

APPLICANT: Leblanc, Anouk

APPLICANT: St. Pierre, Serge

TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES

FILE REFERENCE: 50082001620

CURRENT FILING DATE: 2000-09-05

PRIOR FILING DATE: 2000-09-05

PRIOR FILING DATE: 2000-05-17

PRIOR FILING DATE: 1999-10-15

PRIOR FILING DATE: 1999-05-17

NUMBER OF SEQ ID NOS: 35

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 2

LENGTH: 31

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURES:

OTHER INFORMATION: Description of Artificial Sequence: Synthetic

OTHER INFORMATION: Peptide

US-09-623-618B-2

Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKRG 31

RESULT 9

US-09-333-415-3

Sequence 3, Application US/09333415

Patent No. 6344180

GENERAL INFORMATION:

APPLICANT: Holst, Jens J.

APPLICANT: Vilisboll, Tina

TITLE OF INVENTION: GLP-1 as a Diagnostic Test to Determine Beta-Cell

TITLE OF INVENTION: Function and the Presence of the Condition of IGT and

TITLE OF INVENTION: Type-II Diabetes

FILE REFERENCE: P03987050

CURRENT APPLICATION NUMBER: US/09/333,415

CURRENT FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 13

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 31

TYPE: PRT

ORGANISM: Homo sapiens

US-09-333-415-3

Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
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DB 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKRG 31

RESULT 10

US-09-209-799D-1

Sequence 1, Application US/09209799D

Patent No. 6380357

GENERAL INFORMATION:

APPLICANT: Hermeling, Ronald

APPLICANT: Hoffmann, James

APPLICANT: Narasimhan, Chakravarthy

TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE-1 CRYSTALS

FILE REFERENCE: X-10242

CURRENT APPLICATION NUMBER: US/09/209,799D

CURRENT FILING DATE: 1998-12-11

NUMBER OF SEQ ID NOS: 29

SOFTWARE: PatentIn version 3.0

SEQ ID NO 1

LENGTH: 31

TYPE: PRT

ORGANISM: Homo sapiens

US-09-209-799D-1

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Best Local Similarity 100.0%; Pred. No. 9.9e-17;
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DB 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKRG 31

RESULT 11

US-09-505-991-3

Sequence 3, Application US/09505991

Patent No. 6403361

GENERAL INFORMATION:

APPLICANT: Wagner, Fred W.

APPLICANT: Stout, Jay

APPLICANT: Henriksen, Dennis

Patridge, Bruce
Manning, Shane
TITLE OF INVENTION: Enzymatic Method for Modification of
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSER: Merchant & Gould
STREET: 3100 No. 640361west Center
CITY: Minneapolis
STATE: MN
COUNTRY: USA
ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/505,991
FILING DATE: 17-Feb-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/520,485
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Carter, Charles G.
REGISTRATION NUMBER: 35,093
REFERENCE/DOCKET NUMBER: 8648.32-US01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-3300
TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
IMMEDIATE SOURCE:
CLONE: GLP1 (7-36)-Gly
SEQUENCE DESCRIPTION: SEQ ID NO: 3:

US-09-505-991-3

Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGFTSDVSSYLEGQAQKEFTIAWLKGRG 31

RESULT 12
US-09-303-016-3
; Sequence 3, Application US/09303016
; Patent No. 6429197
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 or its Biologically
; TITLE OF INVENTION: Active Analogues to Improve the Function of the
; TITLE OF INVENTION: Ischemic and Reperfused Brain
; FILE REFERENCE: P03660US2
; CURRENT APPLICATION NUMBER: US/09/303,016
; PRIOR FILING DATE: 1999-04-30
; PRIOR APPLICATION NUMBER: 60/103,498
; PRIOR FILING DATE: 1998-10-08
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PPT
; ORGANISM: Homo sapiens
; OTHER INFORMATION: GLP-1(7-37)
US-09-303-016-3

Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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RESULT 13
US-09-657-332A-2
; Sequence 2, Application US/09657332A
; Patent No. 6514500
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Leblanc, Anouk
; APPLICANT: St. Pierre, Serge
; TITLE OF INVENTION: LONG LASTING SYNTHETIC GLUCAGON LIKE PEPTIDE (GLP-1)
; FILE REFERENCE: 500862001500
; CURRENT APPLICATION NUMBER: US/09/657,332A
; CURRENT FILING DATE: 2001-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PPT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-09-657-332A-2

Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGFTSDVSSYLEGQAQKEFTIAWLKGRG 31

RESULT 14
US-09-614-847-124
; Sequence 124, Application US/09614847
; Patent No. 6528486
; GENERAL INFORMATION:
; APPLICANT: Larsen, Bjarne Due
; APPLICANT: Mikkelsen, Jens Mollgaard
; APPLICANT: Neve, Soren
; TITLE OF INVENTION: NOVEL PEPTIDE AGONISTS OF GLP-1 ACTIVITY
; FILE REFERENCE: 55511(45487)
; CURRENT APPLICATION NUMBER: US/09/614,847
; CURRENT FILING DATE: 2000-07-12
; PRIOR APPLICATION NUMBER: US 60/143,591
; PRIOR FILING DATE: 1999-07-13
; NUMBER OF SEQ ID NOS: 153
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 124
; LENGTH: 31
; TYPE: PPT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: GLP-1(7-37)
US-09-614-847-124

RESULT 15

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Query Match      100.0% Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 9.9e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTTSVSSYLEGQAQKEFTAWLVKRG 31
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Job time : 21.3279 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:55:57 ; Search time 44.2131 Seconds
(without alignments)
112.975 Million cell updates/sec

Title: us-09-719-410-3

Perfect score: 161
Sequence: 1 HAEFTSDVSSYLEQAAKEFIANLVKRG 31

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

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Published Applications_AA:*

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- 11: /cgn2.6/ptodata/1/pubaa/US09C_PUBCOMB.pep.*
- 12: /cgn2.6/ptodata/1/pubaa/US09_NEW_PUB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	161	100.0	31	9	US-09-876-388-2
2	161	100.0	31	9	US-09-851-738-3
3	161	100.0	31	9	US-09-803-507-3
4	161	100.0	31	10	US-09-859-804-3
5	161	100.0	31	10	US-09-982-978-3
6	161	100.0	31	10	US-09-953-021B-3
7	161	100.0	31	11	US-09-834-229A-1
8	161	100.0	31	11	US-09-997-792-1
9	161	100.0	31	12	US-10-097-230-2
10	161	100.0	31	14	US-10-072-540A-1
11	161	100.0	31	15	US-10-093-958-19
12	161	100.0	31	15	US-10-169-557-1
13	161	100.0	31	15	US-10-091-258-3
14	161	100.0	31	15	US-10-035-259-3
15	161	100.0	31	15	US-10-287-892-2

16	161	100.0	31	15	US-10-288-340-2
17	161	100.0	31	15	US-10-265-345A-3
18	161	100.0	35	11	US-09-943-084-1
19	161	100.0	37	9	US-09-876-388-1
20	161	100.0	37	9	US-09-851-738-1
21	161	100.0	37	9	US-09-805-507-1
22	161	100.0	37	10	US-09-859-804-1
23	161	100.0	37	10	US-09-982-978-1
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25	161	100.0	37	12	US-10-097-230-1
26	161	100.0	37	15	US-10-091-258-1
27	161	100.0	37	15	US-10-035-259-1
28	161	100.0	37	15	US-10-287-892-1
29	161	100.0	37	15	US-10-288-340-1
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44	157	97.5	31	15	US-10-169-557-19
45	157	97.5	31	15	US-10-169-557-21

ALIGNMENTS

RESULT 1
US-09-876-388-2
; Sequence 2, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: L'Archeveque, Benoit
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Leblanc, Anouk
; APPLICANT: St. Pierre, Serge
; TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
; FILE REFERENCE: 50082001610
; CURRENT APPLICATION NUMBER: US/09/876,388
; PRIOR FILING DATE: 2001-09-24
; PRIOR APPLICATION NUMBER: 09/623,618
; PRIOR FILING DATE: 2000-09-05
; PRIOR APPLICATION NUMBER: PCT/US00/13563
; PRIOR FILING DATE: 2000-05-17
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: PatentIn ver. 2.1
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PPT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-876-388-2
; OTHER INFORMATION: Peptide

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Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 2
US-09-851-738-3
; Sequence 3, Application US/09851738
; Patent No. US20020055460A1
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; FILE REFERENCE: P036600U1
; CURRENT APPLICATION NUMBER: US/09/851,738
; PRIOR FILING DATE: 2001-05-09
; PRIOR APPLICATION NUMBER: 09/302,596
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: mammalian
US-09-851-738-3

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RESULT 3
US-09-805-507-3
; Sequence 3, Application US/09805507
; Patent No. US20020098195A1
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/805,507
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: 09/859,804
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-805-507-3

Query Match 100.0%; Score 161; DB 9; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

RESULT 4
US-09-859-804-3
; Sequence 3, Application US/09859804
; Patent No. US20020107206A1
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; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS R.
; APPLICANT: EHLERS, MARIO
; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/859,804
; CURRENT FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: 60/205,239
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-859-804-3

Query Match 100.0%; Score 161; DB 10; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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DB 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

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US-09-982-978-3
; Sequence 3, Application US/09982978
; Patent No. US20020146405A1
; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS R.
; APPLICANT: EHLERS, MARIO
; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/982,978
; CURRENT FILING DATE: 2001-10-22
; PRIOR APPLICATION NUMBER: 09/859,804
; PRIOR FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: 60/205,239
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-982-978-3

Query Match 100.0%; Score 161; DB 10; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGRG 31

RESULT 6
US-09-953-021B-3
; Sequence 3, Application US/09953021B
; Patent No. US20020147131A1
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas L.
; APPLICANT: Ehlers, Mario R.W.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; TITLE OF INVENTION: Reperfusion Skeletal Muscle Tissue
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; FILE REFERENCE: P03660US6
; CURRENT APPLICATION NUMBER: US/09/953,021B
; CURRENT FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: 09/302,596
; PRIOR FILING DATE: 1999-04-30
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-953-021B-3

Query Match      100.0%; Score 161; DB 10; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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Db      1 HAEGFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 7
US-09-834-229A-1
; Sequence 1, Application US/09834229A
; Publication No. US2003002283A1
; GENERAL INFORMATION:
; APPLICANT: Eficandic, Suad
; TITLE OF INVENTION: USE OF GLP-1 OR ANALOGS IN TREATMENT OF MYOCARDIAL INFARCTION
; FILE REFERENCE: X-110822A
; CURRENT APPLICATION NUMBER: US/09/834,229A
; CURRENT FILING DATE: 2001-04-22
; PRIOR APPLICATION NUMBER: US 08/915,918
; PRIOR FILING DATE: 1997-08-21
; PRIOR APPLICATION NUMBER: US 06/024,980
; PRIOR FILING DATE: 1996-08-30
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-834-229A-1

Query Match      100.0%; Score 161; DB 11; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      1 HAEGFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 8
US-09-997-792-1
; Sequence 1, Application US/09997792
; Publication No. US2003004545A1
; GENERAL INFORMATION:
; APPLICANT: Hermeling, Ronald
; APPLICANT: Narasimhan, Chakravarthy
; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE-1 CRYSTALS
; FILE REFERENCE: X-10242
; CURRENT APPLICATION NUMBER: US/09/997,792
; CURRENT FILING DATE: 2001-11-30
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-997-792-1
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Query Match      100.0%; Score 161; DB 11; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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Db      1 HAEGFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 9
US-10-097-230-2
; Sequence 2, Application US/10097230
; Publication No. US20030186436A1
; GENERAL INFORMATION:
; APPLICANT: Perfetti, Riccardo
; APPLICANT: Hui, Hongxiang
; TITLE OF INVENTION: Glucose-Dependent Insulin-Secreting Cells Transfected with a
; FILE REFERENCE: 81476-0249704
; CURRENT APPLICATION NUMBER: US/10/097,230
; CURRENT FILING DATE: 2002-03-12
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-097-230-2

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Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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Db      1 HAEGFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 10
US-10-072-540A-1
; Sequence 1, Application US/10072540A
; Publication No. US20020123466A1
; GENERAL INFORMATION:
; APPLICANT: Hoffmann, James
; TITLE OF INVENTION: GLP-1 FORMULATIONS
; FILE REFERENCE: X-11368A
; CURRENT APPLICATION NUMBER: US/10/072,540A
; CURRENT FILING DATE: 2002-02-08
; PRIOR APPLICATION NUMBER: US 60/067,600
; PRIOR FILING DATE: 1997-12-05
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-072-540A-1

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Db      1 HAEGFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 11
US-10-093-958-19
; Sequence 19, Application US/10093958
; Publication No. US20030044423A1
; GENERAL INFORMATION:
; APPLICANT: Gillies, Stephen
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; APPLICANT: Jeffrey, Way
; TITLE OF INVENTION: Expression Technology for Proteins Containing a Hybrid Isotype A
; FILE REFERENCE: Lex-016
; CURRENT APPLICATION NUMBER: US/10/093,958
; CURRENT FILING DATE: 2002-03-07
; PRIOR APPLICATION NUMBER: US 60/274,096
; PRIOR FILING DATE: 2001-03-07
; NUMBER OF SEQ ID NOS: 50
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 19
; LENGTH: 31
; TYPE: PRT
; ORGANISM: artificial sequence
; FEATURE:
; OTHER INFORMATION: glucagon-like peptide 1
US-10-093-958-19

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Best Local Similarity 100.0%; Pred. No. 5.2e-17;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAGTFTSDVSSYLEGQAAKEFIAWLKGRG 31

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US-10-169-657-1
; Sequence 1, Application US/10169657
; Publication No. US20030060412A1
; GENERAL INFORMATION:
; APPLICANT: Eli Lilly and Company
; TITLE OF INVENTION: Process for Solubilizing Glucagon-Like Peptide 1 Compounds
; FILE REFERENCE: X-11708
; CURRENT APPLICATION NUMBER: US/10/169,657
; CURRENT FILING DATE: 2002-06-28
; PRIOR APPLICATION NUMBER: US 60/178,438
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: US 60/224,058
; PRIOR FILING DATE: 2000-08-09
; NUMBER OF SEQ ID NOS: 36
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-169-657-1

Query Match      100.0%; Score 161; DB 15; Length 31;
Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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DB 1 HAGTFTSDVSSYLEGQAAKEFIAWLKGRG 31

RESULT 13
US-10-091-258-3
; Sequence 3, Application US/10091258
; Publication No. US20030073626A1
; GENERAL INFORMATION:
; APPLICANT: Hathaway, David R
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING PERIPHERAL VASCULAR DISEASE
; FILE REFERENCE: RGN-2
; CURRENT APPLICATION NUMBER: US/10/091,258
; CURRENT FILING DATE: 2002-03-05
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 31
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; TYPE: PRT
; ORGANISM: mammalian
US-10-091-258-3

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DB 1 HAGTFTSDVSSYLEGQAAKEFIAWLKGRG 31

RESULT 14
US-10-055-259-3
; Sequence 3, Application US/10055259
; Publication No. US20030091507A1
; GENERAL INFORMATION:
; APPLICANT: Vilsbøll, Tina
; TITLE OF INVENTION: GLP-1 AS A DIAGNOSTIC TEST TO DETERMINE Beta-CELL FUNCTION AND
; FILE REFERENCE: P03987US1
; CURRENT APPLICATION NUMBER: US/10/055,259
; CURRENT FILING DATE: 2002-06-21
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-055-259-3

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DB 1 HAGTFTSDVSSYLEGQAAKEFIAWLKGRG 31

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US-10-287-892-2
; Sequence 2, Application US/10287892
; Publication No. US20030106567A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Leblanc, Anouk
; APPLICANT: St. Pierre, Serge
; TITLE OF INVENTION: LONG LASTING SYNTHETIC GLUCAGON LIKE PEPTIDE (GLP-1)
; FILE REFERENCE: 500862001612
; CURRENT APPLICATION NUMBER: US/10/287,892
; CURRENT FILING DATE: 2002-11-04
; PRIOR APPLICATION NUMBER: 09/657,332
; PRIOR FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-10-287-892-2

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Best Local Similarity 100.0%; Pred. No. 5.2e-17;
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Job time : 45.2131 secs

GenCore version 5.1.6
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OK protein - protein search, using sw model

Run on: October 15, 2003, 10:53:17 ; Search time 295.262 Seconds
(without alignments)
95.534 Million cell updates/sec

Title: US-09-719-410-3
Perfect score: 161
Sequence: 1 HAEGFTSDVSSYLEGQAKEFIANLVKGRG 31

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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Length	DB ID	Description
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2	161	100.0	31	1 PCT-US02-07011-19 Sequence 19, Appli
3	161	100.0	31	1 PCT-US02-13088-3 Sequence 3, Appli
4	161	100.0	31	1 PCT-US02-21325-3 Sequence 3, Appli
5	161	100.0	31	1 PCT-US02-25227-21 Sequence 21, Appli
6	161	100.0	31	1 PCT-US02-31693A-3 Sequence 3, Appli
7	161	100.0	31	1 PCT-US03-00001-5 Sequence 5, Appli
8	161	100.0	31	1 PCT-US03-16443-32 Sequence 32, Appli
9	161	100.0	31	1 PCT-US03-16443-32 Sequence 5, Appli
10	161	100.0	31	1 PCT-US97-01978-3 Sequence 3, Appli
11	161	100.0	31	1 PCT-US98-25115-1 Sequence 1, Appli
12	161	100.0	31	1 PCT-US98-26480-1 Sequence 1, Appli
13	161	100.0	31	3 US-07-899-073-2 Sequence 2, Appli
14	161	100.0	31	4 US-08-044-133-2 Sequence 2, Appli
15	161	100.0	31	7 US-08-350-709-12 Sequence 12, Appli
16	161	100.0	31	7 US-08-356-331-2 Sequence 2, Appli
17	161	100.0	31	9 US-08-520-485-3 Sequence 3, Appli
18	161	100.0	31	12 US-08-842-121A-1 Sequence 1, Appli
19	161	100.0	31	12 US-08-860-103A-2 Sequence 2, Appli
20	161	100.0	31	13 US-08-908-867-37 Sequence 37, Appli
21	161	100.0	31	13 US-08-908-867A-37 Sequence 37, Appli
22	161	100.0	31	13 US-08-908-867-37 Sequence 3, Appli
23	161	100.0	31	14 US-09-091-603-3 Sequence 3, Appli
24	161	100.0	31	16 US-09-206-601-17 Sequence 17, Appli
25	161	100.0	31	16 US-09-206-833-2 Sequence 2, Appli
26	161	100.0	31	16 US-09-206-833-4 Sequence 4, Appli
27	161	100.0	31	18 US-09-400-802A-1 Sequence 1, Appli
28	161	100.0	31	18 US-09-475-158-23 Sequence 23, Appli
29	161	100.0	31	19 US-09-475-158A-23 Sequence 23, Appli
30	161	100.0	31	19 US-09-586-186-1 Sequence 1, Appli
31	161	100.0	31	20 US-09-646-433-3 Sequence 3, Appli
32	161	100.0	31	21 US-09-719-410-3 Sequence 3, Appli
33	161	100.0	31	22 US-09-762-538-2 Sequence 2, Appli
34	161	100.0	31	23 US-09-834-229A-1 Sequence 1, Appli
35	161	100.0	31	23 US-09-851-738-3 Sequence 3, Appli
36	161	100.0	31	23 US-09-858-880-4 Sequence 4, Appli
37	161	100.0	31	23 US-09-859-804-3 Sequence 3, Appli
38	161	100.0	31	23 US-09-876-388-2 Sequence 2, Appli
39	161	100.0	31	25 US-09-953-021-3 Sequence 3, Appli
40	161	100.0	31	25 US-09-953-021B-3 Sequence 3, Appli
41	161	100.0	31	25 US-09-982-978-3 Sequence 3, Appli
42	161	100.0	31	26 US-10-035-259-3 Sequence 3, Appli
43	161	100.0	31	26 US-10-072-540A-1 Sequence 1, Appli
44	161	100.0	31	26 US-10-091-258-3 Sequence 3, Appli
45	161	100.0	31	26 US-10-093-958-19 Sequence 19, Appli

ALIGNMENTS

RESULT 1
PCT-US01-43165-1
; Sequence 1, Application PC/TUS0143165
; GENERAL INFORMATION:
; APPLICANT: Eli Lilly and Company
; TITLE OF INVENTION: GLP-1 FUSION PROTEINS
; FILE REFERENCE: X-13991
; CURRENT APPLICATION NUMBER: PCT/US01/43165
; CURRENT FILING DATE: 2002-10-10
; PRIOR APPLICATION NUMBER: US 60/251,954
; PRIOR FILING DATE: 2000-06-12
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US01-43165-1

Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.1e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 HAEGFTSDVSSYLEGQAKEFIANLVKGRG 31

Db 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
PCT-US02-07011-19
Sequence 19, Application PC/TUS0207011
GENERAL INFORMATION: Pharmaceuticals Corp.
APPLICANT: Gillies, Stephen
APPLICANT: Way, Jeffrey
TITLE OF INVENTION: Expression Technology for Proteins Containing a Hybrid Isotype A
FILE OF INVENTION: Moley
FILE REFERENCE: LEX-016FC
CURRENT APPLICATION NUMBER: PCT/US02/07011
CURRENT FILING DATE: 2002-03-07
PRIOR APPLICATION NUMBER: US 60/274,096
PRIOR FILING DATE: 2001-03-07
NUMBER OF SEQ ID NOS: 50
SOFTWARE: PatentIn version 3.0
SEQ ID NO 19
LENGTH: 31
TYPE: PRT
ORGANISM: artificial sequence
FEATURE:
OTHER INFORMATION: glucagon-like peptide 1
PCT-US02-07011-19
Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
Db 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
PCT-US02-13088-3
Sequence 3, Application PC/TUS0213088
GENERAL INFORMATION:
APPLICANT: Restoragen, Inc.
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING CONDITIONS ASSOCIATED WITH
FILE REFERENCE: RGN-3
CURRENT APPLICATION NUMBER: PCT/US02/13088
CURRENT FILING DATE: 2002-04-24
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 31
TYPE: PRT
ORGANISM: mammalian
PCT-US02-13088-3
Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
Db 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
PCT-US02-21325-3
Sequence 3, Application PC/TUS0221325
GENERAL INFORMATION:
APPLICANT: Eli Lilly & Company
TITLE OF INVENTION: Glucagon-Like Peptide-1 Analogs
FILE REFERENCE: X-15045
CURRENT APPLICATION NUMBER: PCT/US02/21325
CURRENT FILING DATE: 2002-08-14

; PRIOR APPLICATION NUMBER: 60/314,573
; PRIOR FILING DATE: 2001-08-23
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US02-21325-3
Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
Db 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
PCT-US02-25227-21
Sequence 21, Application PC/TUS0225227
GENERAL INFORMATION:
APPLICANT: Genzyme Corporation
APPLICANT: Radsforth, Samuel C.
APPLICANT: Amentano, Donna
APPLICANT: Gregory, Richard J.
APPLICANT: Parsons, Geoffrey
TITLE OF INVENTION: Methods of Treating Diabetes and Other
FILE OF INVENTION: Blood Sugar Disorders
FILE REFERENCE: 2478,2019002 PCT
CURRENT APPLICATION NUMBER: PCT/US02/25227
CURRENT FILING DATE: 2002-08-07
PRIOR APPLICATION NUMBER: US 60/310,982
PRIOR FILING DATE: 2001-08-08
NUMBER OF SEQ ID NOS: 54
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 21
LENGTH: 31
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: GLP-1(7-37)
PCT-US02-25227-21
Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
Db 1 HAEGFTSDVSSYLEGQAQKEFIANLVKRG 31
PCT-US02-31693A-3
Sequence 3, Application PC/TUS0231693A
GENERAL INFORMATION:
APPLICANT: Bayer Corporation
APPLICANT: Pan, Clark
APPLICANT: Whelan, James
APPLICANT: Clairmont, Kevin B.
TITLE OF INVENTION: Peptides Acting as Both GLP-1 Receptor Agonists and Glucagon
FILE OF INVENTION: Receptor Antagonists and Their Pharmacological Methods of Use
FILE REFERENCE: NSB-7288-PCT
CURRENT APPLICATION NUMBER: PCT/US02/31693A
CURRENT FILING DATE: 2002-12-19
PRIOR APPLICATION NUMBER: US 60/327,730
PRIOR FILING DATE: 2001-10-05
NUMBER OF SEQ ID NOS: 34
SOFTWARE: PatentIn version 3.2
SEQ ID NO 3
LENGTH: 31

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; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US02-31693A-3

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.1e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31
  |||||
Db 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 7
PCT-US03-00001-5
; Sequence 5, Application PC/TUS0300001
; GENERAL INFORMATION:
; APPLICANT: ELI LILLY AND COMPANY
; TITLE OF INVENTION: EXTENDED GLUCAGON-LIKE PEPTIDE-1 ANALOGS
; FILE REFERENCE: X-15133
; CURRENT APPLICATION NUMBER: PCT/US03/00001
; CURRENT FILING DATE: 2003-01-03
; NUMBER OF SEQ ID NOS: 60
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US03-00001-5

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.1e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31
  |||||
Db 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 8
PCT-US03-16643-32
; Sequence 32, Application PC/TUS0316643
; GENERAL INFORMATION:
; APPLICANT: Wagner, F.
; APPLICANT: Peng, L.
; APPLICANT: Xia, U.
; APPLICANT: Holmquist, B.
; TITLE OF INVENTION: Methods and DNA Constructs for High Yield Production of Polypeptide
; FILE REFERENCE: 1627.010W01
; CURRENT APPLICATION NUMBER: PCT/US03/16643
; CURRENT FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/383,370
; PRIOR FILING DATE: 2002-05-24
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 32
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: GLP-1(7-37).
PCT-US03-16643-32

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.1e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31
  |||||
Db 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 9
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PCT-US03-16645-5
; Sequence 5, Application PC/TUS0316645
; GENERAL INFORMATION:
; APPLICANT: Wagner, F.
; APPLICANT: Peng, L.
; APPLICANT: Xia, U.
; APPLICANT: Holmquist, B.
; TITLE OF INVENTION: Methods and DNA Constructs for High Yield Production of Polypeptide
; FILE REFERENCE: 1627.009W01
; CURRENT APPLICATION NUMBER: PCT/US03/16645
; CURRENT FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/383,212
; PRIOR FILING DATE: 2002-05-24
; NUMBER OF SEQ ID NOS: 93
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: GLP-1(7-37)
PCT-US03-16645-5

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.1e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31
  |||||
Db 1 HAEGTFTSDVSSYLEGQAQKEFTIAWLKRG 31

RESULT 10
PCT-US97-01978-3
; Sequence 3, Application PC/TUS9701978
; GENERAL INFORMATION:
; APPLICANT: Borts, Tracy L.
; APPLICANT: Broderick, Carol L.
; APPLICANT: Dimarchi, Richard D.
; APPLICANT: Grinnell, Brian W.
; APPLICANT: Miller, Anne R.
; TITLE OF INVENTION: DIABETES THERAPY
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Eli Lilly and Company
; STREET: Lilly Corporate Center
; CITY: Indianapolis
; STATE: Indiana
; COUNTRY: USA
; ZIP: 46285
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US97/01978
; FILING DATE: 06-FEB-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Maciak, Ronald S.
; REGISTRATION NUMBER: 35,262
; REFERENCE/DOCKET NUMBER: X-9872
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (317)276-1664
; TELEFAX: (317)277-1917
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 31 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
PCT-US97-01978-3
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Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31
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Db 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31

RESULT 11

PCT-US98-25515-1

; Sequence 1, Application PC/TUS9825515

; GENERAL INFORMATION:

; APPLICANT: Hoffmann, James A.

; TITLE OF INVENTION: GLP-1 FORMULATIONS

; FILE REFERENCE: X-11368

; CURRENT APPLICATION NUMBER: PCT/US98/25515

; CURRENT FILING DATE: 1998-12-02

; EARLIER APPLICATION NUMBER: US60/067,600

; EARLIER FILING DATE: 1997-12-05

; NUMBER OF SEQ ID NOS: 5

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 1

; LENGTH: 31

; TYPE: PRT

; ORGANISM: Homo sapiens

PCT-US98-25515-1

Query Match 100.0%; Score 161; DB 1; Length 31;
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Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31
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Db 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31

RESULT 12

PCT-US98-26480-1

; Sequence 1, Application PC/TUS9826480A

; GENERAL INFORMATION:

; APPLICANT: Eli Lilly and Company

; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE-1 CRYSTALS

; FILE REFERENCE: X-10242 PCT

; CURRENT APPLICATION NUMBER: PCT/US98/26480A

; CURRENT FILING DATE: 1998-12-14

; EARLIER APPLICATION NUMBER: US 60/069728

; EARLIER FILING DATE: 1997-12-16

; NUMBER OF SEQ ID NOS: 4

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 1

; LENGTH: 31

; TYPE: PRT

; ORGANISM: Homo sapiens

PCT-US98-26480-1

Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31
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Db 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31

RESULT 13

US-07-899-073-2

; Sequence 2, Application US/07899073

; GENERAL INFORMATION:

; APPLICANT: Andrews, Glenn C.

; APPLICANT: Daumy, Gaston O.

; APPLICANT: Francoeur, Michael L.

; APPLICANT: Larson, Eric R.
; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE AND INSULINOTROPIN
; DERIVATIVES
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Gregg C. Benson, Pfizer Inc

; STREET: Eastern Point Road

; CITY: Groton

; STATE: CT

; COUNTRY: USA

; ZIP: 06340

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/07/899,073

; FILING DATE: 19920615

; CLASSIFICATION: 514

; ATTORNEY/AGENT INFORMATION:

; NAME: Benson, Gregg C.

; REGISTRATION NUMBER: 30,997

; REFERENCE/DOCKET NUMBER: PC8156GCB

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (203) 441-4901

; TELEFAX: (203) 441-5221

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 31 amino acids

; TYPE: AMINO ACID

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

US-07-899-073-2

Query Match 100.0%; Score 161; DB 3; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGETTSDVSSYLEGQAARKEFIAMLVKGRG 31
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RESULT 14

US-08-044-133-2

; Sequence 2, Application US/08044133

; GENERAL INFORMATION:

; APPLICANT: Kim, Yessook

; APPLICANT: Lambert, William J.

; APPLICANT: Qi, Hong

; APPLICANT: Gelfand, Robert A.

; APPLICANT: Geoghegan, Kieran F.

; APPLICANT: Danley, Dennis E.

; TITLE OF INVENTION: Prolonged Delivery of Peptides

; NUMBER OF SEQUENCES: 7

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Pfizer Inc

; STREET: 235 East 42nd Street, 20th Floor

; CITY: New York

; STATE: New York

; COUNTRY: U.S.A.

; ZIP: 10017-5755

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.25

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/044,133

; FILING DATE: 07-APR-1993

; CLASSIFICATION: 514

; ATTORNEY/AGENT INFORMATION:

NAME: Shevka, Robert F.
REGISTRATION NUMBER: 31,304
REFERENCE/DOCKET NUMBER: PC8391
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
TELEX: N/A
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE: N/A
ORGANISM: N/A
STRAIN: N/A
INDIVIDUAL ISOLATE: N/A
HAPLOTYPE: N/A
CELL LINE: N/A
IMMEDIATE SOURCE:
LIBRARY: N/A
CLONE: N/A
POSITION IN GENOME:
CHROMOSOME/SEGMENT: N/A
MAP POSITION: N/A
UNITS: N/A

US-08-044-133-2
Query Match 100.0%; Score 161; DB 4; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETSDVSSYLEGQAQAEFTAWLVKGRG 31
DB 1 HAEGETSDVSSYLEGQAQAEFTAWLVKGRG 31

RESULT 15

US-08-350-709-12
Sequence 12, Application US/08350709
GENERAL INFORMATION:
APPLICANT: NISHIMURA, OSAMU
APPLICANT: KURIYAMA, MASATO
APPLICANT: KOYAMA, NOBUYUKI
TITLE OF INVENTION: METHOD FOR PRODUCING A PEPTIDE
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: DAVID G. CONLIN, DIKE, BRONSTEIN, ROBERTS &
ADDRESSEE: CUSHMAN
STREET: 130 WATER STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: US
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/350,709
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 07/838857
FILING DATE: 18-FEB-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 024841-1991

FILING DATE: 19-FEB-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 0271438-1991
FILING DATE: 18-OCT-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 0277734-1991
FILING DATE: 24-OCT-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 0198056-1991
FILING DATE: 07-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: WILLIAMS, GREGORY D.
REGISTRATION NUMBER: 30901
REFERENCE/DOCKET NUMBER: 41614
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 523-3400
TELEFAX: (617) 523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
TOPOLOGY: linear

US-08-350-709-12
Query Match 100.0%; Score 161; DB 7; Length 31;
Best Local Similarity 100.0%; Pred. No. 2.le-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGETSDVSSYLEGQAQAEFTAWLVKGRG 31

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Job time : 295.262 secs

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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:53:47 ; Search time 15.2459 seconds
(without alignments)
62.284 Million cell updates/sec

Title: US-09-719-410-3
Perfect score: 161
Sequence: 1 HAEGETSDVSSYLEGQAKKEFIAMLYKGRG 31

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Total number of hits satisfying chosen parameters: 148013

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Post-processing: Minimum Match 0%

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SUMMARIES

Result No.	Query Match %	Score	Length	ID	Description
1	161	100.0	31	1	PCT-US03-15395B-16
2	161	100.0	31	1	PCT-US03-26818-64
3	161	100.0	31	1	PCT-US03-28093-2
4	161	100.0	31	6	US-10-291-226-124
5	161	100.0	31	6	US-10-656-405-2
6	161	100.0	32	1	PCT-US03-28093-27
7	161	100.0	32	6	US-10-656-405-27
8	157	97.5	31	6	US-10-291-226-123
9	157	97.5	32	1	PCT-US03-28093-28
10	157	97.5	32	6	US-10-291-226-147
11	157	97.5	32	6	US-10-656-405-28
12	157	97.5	37	6	US-10-291-226-122
13	155	96.3	30	1	PCT-US03-26778-14
14	155	96.3	30	1	PCT-US03-26818-48
15	155	96.3	30	1	PCT-US03-28093-1
16	155	96.3	30	5	US-09-341-590A-118
17	155	96.3	30	6	US-10-291-226-114
18	155	96.3	30	6	US-10-656-405-1
19	155	96.3	30	6	US-10-671-340-1
20	155	96.3	31	1	PCT-US03-26779-34
21	155	96.3	31	1	PCT-US03-26778-6
22	155	96.3	31	1	PCT-US03-26818-6
23	155	96.3	31	7	US-60-485-404-34
24	155	96.3	32	1	PCT-US03-28093-30
25	155	96.3	32	6	US-10-656-405-30
26	155	96.3	36	5	US-09-341-590A-92

27	153	95.0	32	1	PCT-US03-28093-29	Sequence 29, Appl
28	153	95.0	32	6	US-10-656-405-29	Sequence 29, Appl
29	152	94.4	36	6	US-10-291-226-115	Sequence 115, Appl
30	151	93.8	30	6	US-10-291-226-87	Sequence 87, Appl
31	151	93.8	30	6	US-10-291-226-112	Sequence 112, Appl
32	151	93.8	30	6	US-10-291-226-113	Sequence 113, Appl
33	151	93.8	31	6	US-10-291-226-111	Sequence 111, Appl
34	151	93.8	36	6	US-10-291-226-88	Sequence 88, Appl
35	151	93.8	36	6	US-10-291-226-90	Sequence 90, Appl
36	151	93.8	36	6	US-10-291-226-103	Sequence 103, Appl
37	151	93.8	36	6	US-10-291-226-116	Sequence 116, Appl
38	151	93.8	36	6	US-10-291-226-119	Sequence 119, Appl
39	151	93.8	37	6	US-10-291-226-117	Sequence 117, Appl
40	151	93.8	37	6	US-10-291-226-153	Sequence 153, Appl
41	151	93.8	38	6	US-10-291-226-89	Sequence 89, Appl
42	151	93.8	38	6	US-10-291-226-120	Sequence 120, Appl
43	151	93.8	40	6	US-10-291-226-121	Sequence 121, Appl
44	151	93.8	42	6	US-10-291-226-118	Sequence 118, Appl
45	150	93.2	29	1	PCT-US03-26778-8	Sequence 8, Appli

ALIGNMENTS

RESULT 1
PCT-US03-15395B-16
; Sequence 16, Application PC/TUS0315395B
; GENERAL INFORMATION:
; APPLICANT: Eli Lilly and Company
; TITLE OF INVENTION: MODIFIED GLUCAGON-LIKE PEPTIDE-1 ANALOGS
; FILE REFERENCE: X-15642
; CURRENT APPLICATION NUMBER: PCT/US03/15395B
; CURRENT FILING DATE: 2003-06-02
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO: 16
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic construct
PCT-US03-15395B-16

Query Match 100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 HAEGETSDVSSYLEGQAKKEFIAMLYKGRG 31
DB 1 HAEGETSDVSSYLEGQAKKEFIAMLYKGRG 31

RESULT 2
PCT-US03-26818-64
; Sequence 64, Application PC/TUS0326818
; GENERAL INFORMATION:
; APPLICANT: PRIOR, Christopher P.
; APPLICANT: LAI, Char-Huei
; APPLICANT: SADRSHI, Homayoun
; APPLICANT: TURNER, Andrew J.
; TITLE OF INVENTION: MODIFIED TRANSFERIN FUSION PROTEINS
; FILE REFERENCE: 54710-5001-01-WO
; CURRENT APPLICATION NUMBER: PCT/US03/26818
; PRIOR FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: US 60/406,977
; PRIOR FILING DATE: 2002-08-30
; PRIOR APPLICATION NUMBER: US 10/378,094
; PRIOR FILING DATE: 2003-03-04
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO: 64
; LENGTH: 31
; TYPE: PRT

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; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: GLP-1(7-37) amino acid sequence
PCT-US03-26818-64

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31
    |||||
Db 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 5
US-10-656-405-2
; Sequence 2, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-2

Query Match      100.0%; Score 161; DB 6; Length 31;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31
    |||||
Db 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 6
PCT-US03-28093-27
; Sequence 27, Application PC/TUS0328093
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: PCT/US03/28093
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 27
; LENGTH: 32
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US03-28093-27

Query Match      100.0%; Score 161; DB 1; Length 32;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31
    |||||
Db 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31

; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: GLP-1(7-37) amino acid sequence
PCT-US03-26818-64

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31
    |||||
Db 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 3
PCT-US03-28093-2
; Sequence 2, Application PC/TUS0328093
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: PCT/US03/28093
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US03-28093-2

Query Match      100.0%; Score 161; DB 1; Length 31;
Best Local Similarity 100.0%; Pred. No. 3.2e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31
    |||||
Db 1 HAEGFTSDVSSYLEGQAAKEFTIAWLKGRG 31

RESULT 4
US-10-291-226-124
; Sequence 124, Application US/10291226
; GENERAL INFORMATION:
; APPLICANT: Larsen, Bjarne Due
; APPLICANT: Mikkelsen, Jens Mollgaard
; APPLICANT: Neve, Soren
; TITLE OF INVENTION: NOVEL PEPTIDE AGONISTS OF GLP-1 ACTIVITY
; FILE REFERENCE: 55511(45487)
; CURRENT APPLICATION NUMBER: US/10/291,226
; CURRENT FILING DATE: 2002-11-08
; PRIOR APPLICATION NUMBER: US/09/614,847
; PRIOR FILING DATE: 12006-07-12
; PRIOR APPLICATION NUMBER: US 60/743,591
; PRIOR FILING DATE: 1999-07-13
; NUMBER OF SEQ ID NOS: 153
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 124
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-291-226-124

Query Match      100.0%; Score 151; DB 6; Length 31;
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RESULT 13
PCT-US03-26778-14
: Sequence 14, Application PC/TUS0326778
: GENERAL INFORMATION:
: APPLICANT: PRIOR, Christopher P.
: APPLICANT: SADEGHI, Homayoun
: APPLICANT: TURNER, Andrew J.
: TITLE OF INVENTION: ORAL DELIVERY OF MODIFIED TRANSFERRIN FUSION PROTEINS
: FILE REFERENCE: 54710-5006-WO
: CURRENT APPLICATION NUMBER: PCT/US03/26778
: CURRENT FILING DATE: 2003-08-28

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: RESULT 15
: PCT-US03-28093-1
: Sequence 1, Application PC/TUS0328093
: GENERAL INFORMATION:
: APPLICANT: Bayer Pharmaceuticals Corporation
: APPLICANT: Pan, Clark
: APPLICANT: Whelan, James
: TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
: TITLE OF INVENTION: Methods of Use
: FILE REFERENCE: M8B-7296
: CURRENT APPLICATION NUMBER: PCT/US03/28093
: CURRENT FILING DATE: 2003-09-04
: PRIOR APPLICATION NUMBER: US 60/408,696

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; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US03-28093-1

Query Match      96.3%; Score 135; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.9e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HADGTTSDVSSYLEGQAQAEFTANLVKGR 30
        .|||||.....|.....|.....|
Db      1 HADGTTSDVSSYLEGQAQAEFTANLVKGR 30

Search completed: October 15, 2003, 11:07:58
Job time : 16.2459 secs
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F:126-158/Product: glucagon-like peptide 2 #status experimental <GL2>
F:107/Modified site: amidated carboxyl end (Arg) (amide in mature form from following g
Query Match 100.0%; Score 161; DB 1; Length 158;
Best Local Similarity 100.0%; Pred. NO. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 31
DB 78 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 108
RESULT 2
GCHU
glucagon precursor [validated] - human
N:Contains: glidentin; glidentin-related polypeptide (GRPP); glucagon; glucagon-like pe
ke peptide 1 (tGIP1)
C:Species: Homo sapiens (man)
C:Date: 24-Apr-1984 #sequence_revision 31-Mar-1993 #text change 08-Dec-2000
C:Accession: A24377; A44197; A30875; A32614; A01541; S23309
E:White, J.W.; Saunders, G.F.
Nucleic Acids Res. 14, 4719-4730, 1986
A:Title: Structure of the human glucagon gene.
A:Reference number: A24377; MUID:86259053; PMID:3725597
A:Accession: A24377
A:Molecule type: DNA
A:Residues: 1-180 <WHI>
R:Cross-references: GB:X03991
R:Bell, G.I.; Sanchez-Pescador, R.; Laybourn, P.J.; Najarian, R.C.
Nature 304, 368-371, 1983
A:Title: Exon duplication and divergence in the human preproglucagon gene.
A:Reference number: A44197; MUID:83271477; PMID:6877358
A:Accession: A44197
A:Molecule type: DNA
A:Residues: 1-179 <BE>
A:Cross-references: GB:V01515; NID:931777; PIDN:CAA24759.1; PID:931778
R:Drucker, D.J.; Asa, S.
J. Biol. Chem. 263, 13475-13478, 1988
A:Title: Glucagon gene expression in vertebrate brain.
A:Reference number: A30875; MUID:86330860; PMID:2901414
A:Accession: A30875
A:Molecule type: mRNA
A:Residues: 1-180 <DR>
R:Cross-references: GB:J04040; NID:9183269; PIDN:AAA52567.1; PID:g183270
R:Orskov, C.; Bersani, M.; Johnsen, A.H.; Hojrup, P.; Holst, J.J.
J. Biol. Chem. 264, 12826-12829, 1989
A:Title: Complete sequences of glucagon-like peptide-1 from human and pig small intestine
A:Reference number: A92732; MUID:89327238; PMID:2733890
A:Accession: A32614
A:Molecule type: protein
A:Residues: 98-127 <ORS>
R:Thomsen, J.; Kristiansen, K.; Brunfeldt, K.; Sundby, F.
FEBS Lett. 21, 315-319, 1972
A:Title: The amino acid sequence of human glucagon.
A:Reference number: A91373
A:Accession: A01541
A:Molecule type: protein
A:Residues: 53-81 <THO>
R:Tsugita, A.; Takanoto, K.; Kamo, M.; Iwamoto, H.
Eur. J. Biochem. 206, 691-696, 1992
A:Title: C-terminal sequencing of protein. A novel partial acid hydrolysis and analysis
A:Reference number: S23309; MUID:92298996; PMID:1606956
A:Accession: S23309
A:Molecule type: protein
A:Residues: 53-81 <TSU>
C:Comment: In pancreatic alpha-cells, proglucagon is processed to glidentin-related poly
stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucagon
dulin.
C:Genetics:
A:Gene: GDB:GCG
A:Cross-references: GDB:119265; OMIM:138030
A:Map position: 2q36-2q37
A:Introns: 31/2; 85/2; 131/2; 179/2

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; in
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status experimental <PGC>
F:21-89/Product: glidentin #status experimental <GIN>
F:21-50/Product: glidentin-related polypeptide #status predicted <GRPP>
F:53-89/Product: oxyntomodulin #status experimental <OXN>
F:53-81/Product: glucagon #status experimental <GCN>
F:92-178/Product: major proglucagon fragment #status experimental <MEGF>
F:92-127/Product: glucagon-like peptide 1 #status experimental <GL1>
F:98-127/Product: truncated glucagon-like peptide 1 #status experimental <TGL>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. NO. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 31
DB 98 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 128
RESULT 3
GCGP
glucagon precursor - guinea pig
N:Alternate names: oxyntomodulin
N:Contains: glidentin-related peptide; glucagon; glucagon-37 (oxyntomodulin); glucag
C:Species: Cavia porcellus (guinea pig)
C:Date: 30-Sep-1987 #sequence_revision 31-Dec-1992 #text change 16-Jun-2000
C:Accession: A24856; A23849; A60323
R:Seino, S.; Welsh, M.; Bell, G.I.; Chan, S.J.; Steiner, D.F.
FEBS Lett. 203, 25-30, 1986
A:Title: Mutations in the guinea pig preproglucagon gene are restricted to a specifi
A:Reference number: A24856; MUID:86248118; PMID:3755107
A:Accession: A24856
A:Molecule type: mRNA
A:Residues: 1-180 <SEI>
R:Cross-references: DBJ:D00014; GB:N00014; NID:g220288; PIDN:BAA00010.1; PID:g220288
R:Huang, C.G.; Eng, J.; Pan, Y.C.E.; Hulmes, J.D.; Yalow, R.S.
Diabetes 35, 508-512, 1986
A:Title: Guinea pig glucagon differs from other mammalian glucagons.
A:Reference number: A23849; MUID:86165412; PMID:3956884
A:Accession: A23849
A:Molecule type: protein
A:Residues: 53-81 <HUA>
R:Conlon, J.M.; Hansen, H.F.; Schwartz, T.W.
Regul. Pept. 11, 303-320, 1985
A:Title: Primary structure of glucagon and a partial sequence of oxyntomodulin (gluc
A:Reference number: A60323; MUID:86017849; PMID:4048553
A:Accession: A60323
A:Molecule type: protein
A:Residues: 53-81 <CON>
A:Note: glucagon-37 was not completely sequenced
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pa
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: glidentin-related peptide #status predicted
F:53-89/Product: glucagon-37 (oxyntomodulin) #status experimental <G37>
F:53-81/Product: glucagon #status experimental <GCN>
F:98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. NO. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 31
DB 98 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGRG 128

RESULT 4
GCRTDU
glucagon precursor - degu
N:Contains: gliadin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
C:Species: Octodon degus (degu)
C:Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
C:Accession: C36118
R:Nishi, M.; Steiner, D.F.
Mol. Endocrinol. 4, 1192-1198, 1990
A:Title: Cloning of complementary DNAs encoding islet amyloid polypeptide, insulin, and
A:Reference number: A36118; MUID:31155952; PMID:2293024
A:Accession: C36118
A:Molecule type: mRNA
A:Residues: 1-180 <NIS>
A:Cross-references: GB:M57688; NID:9202467; PIDN:AA40588.1; PTD:9202468
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:53-81/Product: gliadin-related peptide #status predicted
F:53-81/Product: glucagon-like peptide 1 #status predicted <GL1>
F:98-127/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 31
DB 98 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 128
RESULT 5
GCRT
glucagon precursor - rat
N:Contains: gliadin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
C:Species: Rattus norvegicus (Norway rat)
C:Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 26-Feb-1999
C:Accession: A26655; A25190; A44198
R:Heinrich, G.; Gros, P.; Habener, J.F.
J. Biol. Chem. 259, 14082-14087, 1984
A:Title: Glucagon gene sequence: four of six exons encode separate functional domains of
A:Reference number: A26655; MUID:85054853; PMID:6094539
A:Accession: A26655
A:Molecule type: DNA
A:Residues: 1-180 <HE1>
A:Cross-references: EMBL:K02809
A:Note: The authors translated the codon TTT for residue 10 as Glu and ACC for residue 5
R:Mojssov, S.; Heinrich, G.; Wilson, I.B.; Ravazzola, M.; Orci, L.; Habener, J.F.
J. Biol. Chem. 261, 11880-11889, 1986
A:Title: Preproglucagon gene expression in pancreas and intestine diversifies at the lev
A:Reference number: A25190; MUID:86304324; PMID:3528148
A:Accession: A25190
A:Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-180 <MOJ>
R:Heinrich, G.; Gros, P.; Lund, P.K.; Bentley, R.C.; Habener, J.F.
Endocrinology 115, 2176-2181, 1984
A:Title: Pre-proglucagon messenger ribonucleic acid: nucleotide and encoded amino acid s
A:Reference number: A44198; MUID:85051023; PMID:6548696
A:Accession: A44198
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-180 <HE2>
A:Cross-references: GB:K02809; GB:K02810; GB:K02811; GB:K02812
C:Genetics:
A:Introns: 31/2; 85/2; 131/2; 179/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>

F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: gliadin-related peptide #status predicted
F:53-81/Product: glucagon #status predicted <GCN>
F:98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F:146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 31
DB 98 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 128
RESULT 6
GCXY
glucagon precursor - golden hamster
N:Contains: gliadin-related peptide; glucagon; glucagon-like peptide 1; glucagon-l
C:Species: Mesocricetus auratus (golden hamster)
C:Date: 13-Jun-1983 #sequence_revision 13-Jun-1983 #text_change 20-Mar-1998
C:Accession: A01539
R:Bell, G.I.; Santerre, R.F.; Mullenbach, G.T.
Nature 302, 716-718, 1983
A:Title: Hamster preproglucagon contains the sequence of glucagon and two related pe
A:Reference number: A01539; MUID:83167563; PMID:6835407
A:Accession: A01539
A:Molecule type: mRNA
A:Residues: 1-180 <BEL>
A:Cross-references: EMBL:J00059
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pe
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: gliadin-related peptide #status predicted
F:53-81/Product: glucagon-like peptide 1 #status predicted <GL1>
F:98-127/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 31
DB 98 HAEGFTSDVSSYLEGQAARKEFIANLVKRG 128
RESULT 7
GCBO
glucagon precursor - bovine
N:Contains: gliadin-related peptide; glucagon; glucagon-like peptide 1; glucagon-l
C:Species: Bos primigenius taurus (cattle)
C:Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 20-Mar-1998
C:Accession: A93970; A92081; A01538
R:Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, G.F.
Proc. Natl. Acad. Sci. U.S.A. 80, 5485-5489, 1983
A:Title: Mammalian pancreatic preproglucagon contains three glucagon-related peptid
A:Reference number: A93970; MUID:83299996; PMID:6577439
A:Accession: A93970
A:Molecule type: mRNA
A:Residues: 1-180 <LOP>
A:Cross-references: EMBL:K00107
R:Bromer, W.W.; Boucher, M.B.; Koffenberger Jr., J.E.
J. Biol. Chem. 246, 2822-2827, 1971
A:Title: Amino acid sequence of bovine glucagon.
A:Reference number: A92081; MUID:71166445; PMID:5102927
A:Accession: A92081
A:Molecule type: protein
A:Residues: 53-81 <BO>
C:Superfamily: glucagon

C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: glucocorticoid-related peptide #status predicted
F:53-81/Product: glucagon #status experimental <GCN>
F:58-127/Product: glucagon-like peptide 1 #status experimental <GL1>
F:98-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:148-178/Product: glucagon-like peptide 1 #status predicted <GL1>
F:147/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 31
DB 98 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 128
RESULT 8
A57294
glucagon precursor - mouse
C:Species: Mus musculus (house mouse)
C:Date: 01-Dec-1995 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
C:Accession: A57294; S49903
R:Kocherberg, M.E.; Ellertson, C.D.; Klein, K.; Zhou, Y.; Lindberg, I.; McDonald, J.K.;
J. Biol. Chem. 270, 10136-10146, 1995
A:Title: Processing of mouse proglucagon by recombinant prohormone convertase 1 and immu
A:Reference number: A57294; PMID:7730317
A:Accession: A57294
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-180 <EC>
A:Cross-references: EM3:246045; NID:9599880; PIDN:CAA6902.1; PID:9599881
C:Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
Query Match 100.0%; Score 161; DB 2; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.5e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 31
DB 98 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 128
RESULT 9
GCCB
glucagon precursor - chicken
N:Contains: glucagon glucagon-like peptide 1
C:Species: Gallus gallus (chicken)
C:Date: 31-Dec-1991 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
C:Accession: S09992; A92189; A60836; A01542
R:Hasegawa, S.; Terazono, K.; Kata, K.; Takada, T.; Yamamoto, H.; Okamoto, H.
FEBS Lett. 264, 117-120, 1990
A:Title: Nucleotide sequence determination of chicken glucagon precursor cDNA. Chicken F
A:Reference number: S09992; PMID:90249492; PMID:2338135
A:Accession: S09992
A:Molecule type: mRNA
A:Residues: 1-151 <HAS>
A:Cross-references: EMEL:Y07539; NID:965749; PIDN:CAA68827.1; PID:963750
R:Pollock, H.G.; Kimmel, J.R.
J. Biol. Chem. 250, 9377-9380, 1975
A:Title: Chicken glucagon. Isolation and amino acid sequence studies.
A:Reference number: A92189; PMID:76065271; PMID:1194290
A:Accession: A92189
A:Molecule type: protein
A:Residues: 55-83 <POL>
R:Huang, J.; Eng, J.; Yalow, R.S.
Horm. Metab. Res. 19, 542-544, 1987
A:Title: Chicken glucagon: sequence and potency in receptor assay.
A:Reference number: A60836; PMID:88113418; PMID:2828209
A:Accession: A60836
A:Molecule type: protein

A;Residues: 55-83 <HVA>
C:Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pa
F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-151/Product: proglucagon #status predicted <PGC>
F:55-83/Product: glucagon #status experimental <GCN>
F:118-147/Product: glucagon-like peptide 1 #status predicted <GL1>
F:147/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 92.5%; Score 149; DB 1; Length 151;
Best Local Similarity 87.1%; Pred. No. 6.3e-14;
Matches 27; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 31
DB 118 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 148
RESULT 10
IS1301
proglucagon - chicken
C:Species: Gallus gallus (chicken)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C:Accession: IS1301
R:Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A:Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcri
A:Reference number: A58895; PMID:95395739; PMID:7776976
A:Accession: IS1301
A:Status: preliminary; translated from GE/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-206 <IRW>
A:Cross-references: GB:S78477; NID:9999386; PIDN:AA834506.1; PID:9999387
C:Superfamily: glucagon
C;Keywords: Duplication
Query Match 92.5%; Score 149; DB 2; Length 206;
Best Local Similarity 87.1%; Pred. No. 8.8e-14;
Matches 27; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 31
DB 118 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGRG 148
RESULT 11
GCRGB
glucagon precursor - bullfrog (fragments)
N:Alternate names: oxyntomodulin
N:Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1; glucagon-
C:Species: Rana catesbeiana (bullfrog)
C:Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
C:Accession: B28091; C28091; D28091
R:Pollock, H.G.; Hamilton, J.W.; Rouse, J.B.; Ebner, K.E.; Rawitch, A.B.
J. Biol. Chem. 263, 9746-9751, 1988
A:Title: Isolation of peptide hormones from the pancreas of the bullfrog (Rana cates
A:Reference number: A92730; PMID:88257102; PMID:3260236
A:Accession: B28091
A:Molecule type: protein
A:Residues: 1-36 <PO2>
A:Accession: C28091
A:Molecule type: protein
A:Residues: 37-68 <POL>
A:Accession: D28091
A:Molecule type: protein
A:Residues: 69-101 <PO3>
C:Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F:1-36/Product: glucagon-36 (oxyntomodulin) #status experimental <G36>
F:1-29/Product: glucagon #status predicted <GCN>
F:37-67/Product: glucagon-like peptide 1 #status experimental <GL1>
F:69-101/Product: glucagon-like peptide 2 #status experimental <GL2>

Query Match 80.1%; Score 129; DB 1; Length 101;
Best Local Similarity 76.7%; Pred. No. 3e-11; 2; Indels 0; Gaps 0;
Matches 23; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

QY 1 HADGFTSDVSSYLEGQAQAEFIAMLYKGR 30
||:|||||:|||||:|||||:|||||
Db 37 HADGFTSDMSYLEKAKEFVDWLKGR 66

RESULT 12
B61125
glucagon-like peptide - American eel
C:Species: Anguilla rostrata (American eel)
C>Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C:Accession: B61125
R:Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A:Title: The primary structure of glucagon-like peptide but not insulin has been conserv
A:Reference number: A61125; MUID:91340068; PMID:1874385
A:Accession: B61125
A:Molecule type: protein
A:Residues: 1-30 <CON>
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication
F:1-30/Product: glucagon-like peptide #status experimental <GLP>
F:30/Modified site: amidated carboxyl end (Arg) #status predicted

Query Match 78.3%; Score 126; DB 2; Length 30;
Best Local Similarity 76.7%; Pred. No. 2.2e-11;
Matches 23; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 HADGFTSDVSSYLEGQAQAEFIAMLYKGR 30
|||:|||||:|||||:|||||:||
Db 1 HADGFTSDVSSYLQQAQAEFVSMKGR 30

RESULT 13
C61125
glucagon-like peptide - European eel
C:Species: Anguilla anguilla (European eel)
C>Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C:Accession: C61125
R:Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A:Title: The primary structure of glucagon-like peptide but not insulin has been conserv
A:Reference number: A61125; MUID:91340068; PMID:1874385
A:Accession: C61125
A:Molecule type: protein
A:Residues: 1-30 <CON>
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication
F:1-30/Product: glucagon-like peptide #status experimental <GLP>
F:30/Modified site: amidated carboxyl end (Arg) #status experimental

Query Match 78.3%; Score 126; DB 2; Length 30;
Best Local Similarity 76.7%; Pred. No. 2.2e-11;
Matches 23; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 HADGFTSDVSSYLEGQAQAEFIAMLYKGR 30
|||:|||||:|||||:|||||:||
Db 1 HADGFTSDVSSYLQQAQAEFVSMKGR 30

RESULT 14
G6AF2
glucagon 2 precursor - American goosefish
N:Contains: glucagon; glucagon-like peptide 1
C:Species: Lophius americanus (American goosefish)
C>Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Jul-2000
C:Accession: A05150
R:Lund, P.K.; Goodman, R.H.; Montminy, M.R.; Dee, P.C.; Habener, J.F.
J. Biol. Chem. 258, 3280-3284, 1983
A:Title: Anglerfish islet pre-proglucagon II. Nucleotide and corresponding amino acid se

A:Reference number: A05150; MUID:83135785; PMID:6338015
A:Accession: A05150
A:Molecule type: mRNA
A:Residues: 1-122 <LUX>
A:Cross-references: GB:J00933; NID:g64021; PIDN:CAA23905.1; PID:g64022
C:Superfamily: glucagon
C:Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F:1-21/Domain: signal sequence #status predicted <SIG>
F:22-122/Product: proglucagon 2 #status predicted <PGC2>
F:52-80/Product: glucagon #status predicted <GCN>
F:89-119/Product: glucagon-like peptide 1 #status predicted <GLI>

Query Match 78.3%; Score 126; DB 1; Length 122;
Best Local Similarity 71.0%; Pred. No. 1e-10; 3; Indels 0; Gaps 0;
Matches 22; Conservative 6; Mismatches 3; Indels 0; Gaps 0;

QY 1 HADGFTSDVSSYLEGQAQAEFIAMLYKGR 31
||:|||||:|||||:|||||:||||
Db 89 HADGFTSDVSSYLQQAQAEFVSMKAGRG 119

RESULT 15
T51093
glucagon - chinook salmon (fragment)
C:Species: Oncorhynchus tshawytscha (chinook salmon)
C>Date: 13-Sep-1995 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C:Accession: T51093
R:Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A:Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcr
A:Reference number: A55895; MUID:95295739; PMID:7776976
A:Accession: T51093
A>Status: preliminary; translated from GE/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-66 <IRW>
A:Cross-references: EMBL:U19920; NID:g736366; PIDN:AAC59670.1; PID:g736367
C:Superfamily: glucagon
C:Keywords: duplication

Query Match 73.3%; Score 118; DB 2; Length 66;
Best Local Similarity 66.7%; Pred. No. 7.2e-10; 7; Mismatches 3; Indels 0; Gaps 0;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

QY 1 HADGFTSDVSSYLEGQAQAEFIAMLYKGR 30
||:|||||:|||||:|||||:||||
Db 33 HADGFTSDVSTYLQQAQAEFVSMKSGR 62

Search completed: October 15, 2003, 10:56:43
Job time : 25.4098 secs

CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC HUMAN SEQUENCE.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.

DR PDB: 1GCG; 30-SEP-83.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; hormone2; 3.
DR SMART: SM00070; GLUCA; 3.
DR PROSITE: PS00260; Hormone; Cleavage on pair of basic residues;
KW Glucagon family; Hormone; Cleavage on pair of basic residues;
FT 3D-structure.

FT NON_TER 1 1
FT PEPTIDE 1 69 GLICENTIN.
FT PEPTIDE 1 30 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 33 61 GLUCAGON.
FT PEPTIDE 78 107 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 126 158 GLUCAGON-LIKE PEPTIDE 2.
FT HELIX 39 42
FT TURN 43 45
FT TURN 46 55
FT TURN 56 57
FT HELIX 58 59
SQ SEQUENCE 158 AA; 18212 MW; 28C6FCF257F333B2 CRC64;

Query Match 100.0%; Score 161; DB 1; Length 158;
Best Local Similarity 100.0%; Pred. No. 1.1e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSVLSGQAQAEFTANLVKGRG 31
DB 78 HAEGFTSDVSSVLSGQAQAEFTANLVKGRG 108

RESULT 2

GLUC_BOVIN
ID GLUC_BOVIN STANDARD; PRT; 180 AA.
AC F01272;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucicentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP MEDLINE=83299996; PubMed=6577439;
RA Lopez L.C., Frazier M.L., Su C.-J., Kumar A., Saunders G.F.;
RT "Mammalian pancreatic preproglucagon contains three glucagon-related
RT peptides";
RL Proc. Natl. Acad. Sci. U.S.A. 80:5485-5489(1983).
RN [2]
RP SEQUENCE OF 53-81.
RX MEDLINE=71166445; PubMed=5102927;
RA Brower W.W., Boucher M.E., Koffenberger J.E. Jr.;
RT "Amino acid sequence of bovine glucagon";
RL J. Biol. Chem. 246:2822-2827(1971).
RN [3]
RP STRUCTURE BY NMR OF 53-81.
RX MEDLINE=71166445; PubMed=6631957;
RA Braun W., Wider G., Lee K.H., Wuthrich K.;
RT "Conformation of glucagon in a lipid-water interphase by 1H nuclear
RT magnetic resonance";
RL J. Mol. Biol. 159:921-948(1983).

CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOSIDE AND LIPIDS, AND

CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC EMBL: K00107; AAA30538.1; -
DR PDB: 1KX6; 13-FEB-02.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; hormone2; 3.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUCA; 3.
DR PROSITE: PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
FT 3D-structure.

FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON.
FT PROPEP 84 89
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 142
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT TURN 60 64
FT TURN 74 74
FT HELIX 75 78
SQ SEQUENCE 180 AA; 20944 MW; 8D9B4FF05B9F15FF CRC64;

Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSVLSGQAQAEFTANLVKGRG 31
DB 98 HAEGFTSDVSSVLSGQAQAEFTANLVKGRG 128

RESULT 3

GLUC_CAVPO
ID GLUC_CAVPO STANDARD; PRT; 180 AA.
AC P05110;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucicentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-37 (Oxyntomodulin); Glucagon-like peptide 1 (GLP1);
DE Glucagon-like peptide 2 (GLP2)].
GN GCG.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Mystricognathia; Caviidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86248118; PubMed=3755107;
RA Seino S., Welsh M., Bell G.I., Chan S.J., Steiner D.F.;
RT "Mutations in the guinea pig preproglucagon gene are restricted to a
RT specific portion of the prohormone sequence";
RL FEBS Lett. 203:25-30(1986).
RN [2]
RP SEQUENCE OF 53-81.
RX MEDLINE=86165412; PubMed=3956884;
RA Huang C.G., Eng J., Fan Y.-C.B., Hulmes J.D., Yalow R.S.;
RT "Guinea pig glucagon differs from other mammalian glucagons";

Diabetes 35:508-512(1986).
[3]
RN PARTIAL SEQUENCE OF 53-89.
RX MEDLINE=86017849; PubMed=4048553;
RA Conlon J.M., Hansen H.F., Schwartz T.W.;
RT "Primary structure of glucagon and a partial sequence of
RT oxyntomodulin (glucagon-37) from the guinea pig.";
RL Nucleic Acids Res. 11:309-320(1985).
CC
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC
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CC or send an email to license@sib-sib.ch).
CC
CC EMBL; D00014; BAA00010.1; -
DR PIR; A24856; GCGP.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; glucagon.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; hormone; cleavage on pair of basic residues; signal.
FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON.
FT PEPTIDE 89 99 GLUCAGON-37.
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
SQ SEQUENCE 180 AA; 20972 MW; 702FB181161D2776 CRC64;
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETTSVSVSYLEGQAKREINLYKGRG 31
DD 98 HAEGETTSVSVSYLEGQAKREINLYKGRG 128
RESULT 4
ID GLUC_HUMAN STANDARD; PRT; 180 AA.
AC P01275;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2003 (Rel. 42, Last annotation update)
DE Glucagon precursor [contains: Glucatin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86330860; PubMed=2901414;
RA Drucker D.J., Asa S.;
RT "Glucagon gene expression in vertebrate brain.";
RL J. Biol. Chem. 263:13475-13478(1988).
[2]
RP SEQUENCE FROM N.A.
RX MEDLINE=86259053; PubMed=3725587;
RA White J.W., Saunders G.F.;
RT "Structure of the human glucagon gene.";
RL Nucleic Acids Res. 14:4719-4730(1986).
[3]
RP SEQUENCE FROM N.A.
RX MEDLINE=6877358;
RA Bell G.I., Sanchez-Pascador R., Laybourn P.J., Najarian R.C.;
RT "Sexon duplication and divergence in the human preproglucagon gene.";
RL Nature 304:368-371(1983).
[4]
RP SEQUENCE FROM N.A.
RX MEDLINE=23388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.C.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusita K., Farmer A.A., Rubin G.M., Hong L.,
RA Scapleton M., Soares M.B., Donald M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udell T.B., Yoshlyuk S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahney J., Halton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
[5]
RP SEQUENCE OF 53-81.
RA Thomsen J., Kristiansen K., Brunfeldt K., Sundby F.;
RT "The amino acid sequence of human glucagon.";
RL FEBS Lett. 21:315-319(1972).
[6]
RP SEQUENCE OF 98-127.
RX MEDLINE=89327238; PubMed=2753890;
RA Orskov C., Bersani M., Johnsen A.H., Hoelrup P., Holst J.J.;
RT "Complete sequences of glucagon-like peptide-1 from human and pig
RT small intestine.";
RL J. Biol. Chem. 264:12826-12829(1989).
[7]
RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS) OF 53-81.
RX MEDLINE=9834683; PubMed=9667960;
RA Sturm N.S., Lin Y., Burley S.K., Krstenansky J.L., Ann J.M.,
RA Aizhen B.Y., Trivedi D., Hruby V.J.;
RT "Structure-function studies on positions 17, 18, and 21 replacement
RT analogues of glucagon: the importance of charged residues and salt
RT bridges in glucagon biological activity.";
RL J. Med. Chem. 41:2693-2700(1998).
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC
CC -1- PHARMACEUTICAL: Available under the names Glucagon (Eli Lilly) and
CC Glucagon or Glucagon Novo Nordisk (Novo Nordisk). Used to treat
CC severe hypoglycemia in insulin-dependent diabetics.
CC
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC
CC -1- DATABASE: NAME=Glucagon at Eli Lilly;
CC NCB-Genbank information on Eli Lilly glucagon products;
CC WWW="http://www.lillydiabetes.com/Products/Patientinfo.cfm"
CC
CC -----

Diabetes 35:508-512(1986).
[3]
RN PARTIAL SEQUENCE OF 53-89.
RX MEDLINE=86017849; PubMed=4048553;
RA Conlon J.M., Hansen H.F., Schwartz T.W.;
RT "Primary structure of glucagon and a partial sequence of
RT oxyntomodulin (glucagon-37) from the guinea pig.";
RL Nucleic Acids Res. 11:309-320(1985).
CC
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC
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CC
CC EMBL; D00014; BAA00010.1; -
DR PIR; A24856; GCGP.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; glucagon.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; hormone; cleavage on pair of basic residues; signal.
FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON.
FT PEPTIDE 89 99 GLUCAGON-37.
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
SQ SEQUENCE 180 AA; 20972 MW; 702FB181161D2776 CRC64;
Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETTSVSVSYLEGQAKREINLYKGRG 31
DD 98 HAEGETTSVSVSYLEGQAKREINLYKGRG 128
RESULT 4
ID GLUC_HUMAN STANDARD; PRT; 180 AA.
AC P01275;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2003 (Rel. 42, Last annotation update)
DE Glucagon precursor [contains: Glucatin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86330860; PubMed=2901414;
RA Drucker D.J., Asa S.;
RT "Glucagon gene expression in vertebrate brain.";
RL J. Biol. Chem. 263:13475-13478(1988).
[2]
RP SEQUENCE FROM N.A.
RX MEDLINE=86259053; PubMed=3725587;
RA White J.W., Saunders G.F.;
RT "Structure of the human glucagon gene.";
RL Nucleic Acids Res. 14:4719-4730(1986).
[3]
RP SEQUENCE FROM N.A.
RX MEDLINE=6877358;
RA Bell G.I., Sanchez-Pascador R., Laybourn P.J., Najarian R.C.;
RT "Sexon duplication and divergence in the human preproglucagon gene.";
RL Nature 304:368-371(1983).
[4]
RP SEQUENCE FROM N.A.
RX MEDLINE=23388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.C.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusita K., Farmer A.A., Rubin G.M., Hong L.,
RA Scapleton M., Soares M.B., Donald M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udell T.B., Yoshlyuk S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahney J., Halton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
[5]
RP SEQUENCE OF 53-81.
RA Thomsen J., Kristiansen K., Brunfeldt K., Sundby F.;
RT "The amino acid sequence of human glucagon.";
RL FEBS Lett. 21:315-319(1972).
[6]
RP SEQUENCE OF 98-127.
RX MEDLINE=89327238; PubMed=2753890;
RA Orskov C., Bersani M., Johnsen A.H., Hoelrup P., Holst J.J.;
RT "Complete sequences of glucagon-like peptide-1 from human and pig
RT small intestine.";
RL J. Biol. Chem. 264:12826-12829(1989).
[7]
RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS) OF 53-81.
RX MEDLINE=9834683; PubMed=9667960;
RA Sturm N.S., Lin Y., Burley S.K., Krstenansky J.L., Ann J.M.,
RA Aizhen B.Y., Trivedi D., Hruby V.J.;
RT "Structure-function studies on positions 17, 18, and 21 replacement
RT analogues of glucagon: the importance of charged residues and salt
RT bridges in glucagon biological activity.";
RL J. Med. Chem. 41:2693-2700(1998).
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC
CC -1- PHARMACEUTICAL: Available under the names Glucagon (Eli Lilly) and
CC Glucagon or Glucagon Novo Nordisk (Novo Nordisk). Used to treat
CC severe hypoglycemia in insulin-dependent diabetics.
CC
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC
CC -1- DATABASE: NAME=Glucagon at Eli Lilly;
CC NCB-Genbank information on Eli Lilly glucagon products;
CC WWW="http://www.lillydiabetes.com/Products/Patientinfo.cfm"
CC
CC -----

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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: J04040; ARA52567.1; -
CC EMBL: X03991; CAA27627.1; -
CC EMBL: V01515; CAA24759.1; -
CC EMBL: BC005276; AA005276.1; -
CC PIR: A24377; GCHU.
CC PDB: 1BHO; 18-NOV-98.
CC PDB: 1DUR; 23-OCT-02.
CC Genew: HGNC:4191; GCG.
CC MIM: 138030; -
CC GO: GO:0005625; C:soluble fraction; TAS.
CC GO: GO:0008283; P:cell proliferation; TAS.
CC GO: GO:0007631; P:feeding behavior; TAS.
CC GO: GO:0007186; P:6-protein coupled receptor protein signalin...; TAS.
CC GO: GO:0007165; P:signal transduction; TAS.
CC InterPro: IPR000532; Glucagon.
CC Pfam: PF00123; hormone2; 3.
CC SMART: SM00070; GLUCA; 3.
CC PROSITE: PS00260; GLUCAGON; 4.
KW Glucagon family; 3D-structure; Polymorphism.
FT SIGNAL 1 20 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 21 50 GLUCAGON.
FT PROPEP 53 81
FT PROPEP 84 96 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 98 127
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT VARIANT 115 115 A->V (IN dbSNP:5650).
FT CONFLICT 82 82 /FTID-VAR_014596.
FT TURN 59 62 K -> N (IN REF. 3).
FT TURN 63 77
FT TURN 78 79
SQ SEQUENCE 180 AA; 20909 MW; 7A99EEC629E2862C CRC64;

Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 HAEGFTSDVSSYLEGQAKEFIANLVKRG 31
DB 98 HAEGFTSDVSSYLEGQAKEFIANLVKRG 128

RESULT 5
GLUC_MESAU STANDARD; PRT; 180 AA.
AC P01273;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Mesocricetus auratus (Golden hamster).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
OC Mesocricetus.
OX NCBI_TaxID=10036;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=63167563; PubMed=6935407;
RA Bell G.I., Santerre R.F., Mullenbach G.T.;

RT "Hamster preproglucagon contains the sequence of glucagon and two
RT related peptides".
RL Mature 302:718-718(1983).
RN [2]
RP REVISIONS TO 12-15.
RA Bell G.I.;
RU Submitted (XX-1985) to the EMBL/GenBank/DBJ databases
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: J00059; AAA37074.1; -
CC HSP: P01274; IGCN.
CC InterPro: IPR000532; Glucagon.
CC Pfam: PF00123; hormone2; 3.
CC SMART: SM00070; GLUCA; 3.
CC PROSITE: PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PROPEP 53 81 GLUCAGON.
FT PROPEP 84 89
FT PROPEP 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT SEQUENCE 180 AA; 20954 MW; 02791E49D7AADD4B CRC64;

Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 HAEGFTSDVSSYLEGQAKEFIANLVKRG 31
DB 98 HAEGFTSDVSSYLEGQAKEFIANLVKRG 128

RESULT 6
GLUC_MOUSE STANDARD; PRT; 180 AA.
AC P55095;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=5247722; PubMed=7730317;
RA Rothenberg M.E., Ellertson C.D., Klein K., Zhou Y., Linberg I.,
RA McDonald J.K., Mackin R.B., Noe B.D.;
RP "Processing of mouse proglucagon by recombinant prohormone convertase
RP 1 and immunopurified prohormone convertase 2 in vitro."
RL J. Biol. Chem. 270:10136-10146(1995).

```

RN SEQUENCE FROM N.A.
RA Shamsadin R., Knebel W.;
RT "Mouse glucagon, full length cDNA.";
CC SUBMITTED (JUN-2000) TO THE EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC -!- IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC -----
DR EMBL; 246845; CRA85902.1; -.
DR EMBL; AF276754; AA896898.1; -.
DR PIR; A57294; A57294.
DR HSSP; P01274; IGCN.
DR MGD; MGI:95674; Gcg.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PRO0275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL 1 20
FT PEPIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PROPEP 84 89 GLUCAGON.
FT PEPIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT PROPEP 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT PEPIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT MOD_RES 127 127 AMIDATION (G-128 PROVIDE AMIDE GROUP).
SQ SEQUENCE 180 AA; 20906 MW; 595AA6DD9A589950 CRC64;

Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HREGTFTSDVSSYLEGQAQKEFIAMLYKGRG 31
DB 98 HREGTFTSDVSSYLEGQAQKEFIAMLYKGRG 128

RESULT 7
GLUC_OCTDE STANDARD; PRT; 180 AA.
AC P22890;
DT 01-AUG-1991 (Rel. 19, Created)
DT 01-AUG-1991 (Rel. 19, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucocentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Octodon degus (Degu).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystriocognathi; Octodontidae; Octodon.
CX NCBI_TaxID=10160;
RN [1]
RP MEDLINE=91155952; PubMed=2293024;
RX Nishi M., Steiner D.F.;
RT "Cloning of complementary DNAs encoding islet amyloid polypeptide,
RT insulin, and glucagon precursors from a New World rodent, the degu,
RT Octodon degus.";
```

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RL Mol. Endocrinol. 4:1192-1198(1990).
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC -!- IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC -----
DR EMBL; M57688; AAA40588.1; -.
DR PIR; C36118; GCRWDJ.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PRO0275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Amidation.
FT SIGNAL 1 20
FT PEPIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PROPEP 84 89 GLUCAGON.
FT PEPIDE 92 127 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 142
FT PEPIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT MOD_RES 127 127 AMIDATION (G-128 PROVIDE AMIDE GROUP).
SQ SEQUENCE 180 AA; 21165 MW; 6B8836160A9A3051 CRC64;

Query Match 100.0%; Score 161; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HREGTFTSDVSSYLEGQAQKEFIAMLYKGRG 31
DB 98 HREGTFTSDVSSYLEGQAQKEFIAMLYKGRG 128

RESULT 8
GLUC_RAT STANDARD; PRT; 180 AA.
AC P06883;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-JAN-1988 (Rel. 06, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucocentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
CX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=85054853; PubMed=6094539;
RA Heinrich G., Gros P., Habener J.F.;
RT "Glucagon gene sequence. Four of six exons encode separate functional
RT domains of rat pre-proglucagon."
RL J. Biol. Chem. 259:14082-14087(1984).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=85051023; PubMed=6548696;
RA Heinrich G., Gros P., Lund P.K., Bentley R.C., Habener J.F.;
```


DR	PRINTS; PRO0275; GLUCAGON.	
DR	SMART; SM00070; GLUCA; 3.	
DR	PROSITE; PS00260; GLUCAGON; 2.	
KW	Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;	
KW	Amidation; Alternative splicing.	
FT	FT SIGNAL	1 20
FT	FT PEPTIDE	21 50
FT	FT PEPTIDE	53 81
FT	FT PROPEP	84 114
FT	FT PEPTIDE	116 145
FT	FT PROPEP	149 161
FT	FT PEPTIDE	164 196
FT	FT PROPEP	197 204
FT	FT MOD_RES	145 145
FT	FT VARSPLIC	149 149
FT	FT VARSPLIC	150 204
FT	FT SEQUENCE	204 AA; 23553 MW; 316287B7BAELCSF7 CRC64;
Query Match		88.8%; Score 143; DB 1; Length 204;
Best Local Similarity		83.9%; Pred. No. 5e-13;
Matches	26; Conservative	3; Mismatches 2; Indels 0; Gaps
QY	1 HAEGFTFSVSSYLEGQAQKEFTAMLVNKGK 31	
DB	116 HDGRTSDISSYLEGQAQKEFTAMLVNKGK 146	
RESULT 11		
ID	GLUC_RANCA	STANDARD; PRT; 103 AA.
AC	P15438; P15439; F15440;	
CD	01-APR-1990 (Rel. 14, Created)	
DT	01-JUL-1993 (Rel. 26, Last sequence update)	
DT	01-JUL-1993 (Rel. 26, Last annotation update)	
DE	Glucagon precursor (Fragments).	
OS	Rana catesbeiana (Bull frog).	
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	
OC	Amphibia; Batrachia; Anura; Neobatrachia; Ranoidae; Rana.	
OX	NCBI_TaxID=8400;	
RP	[1]	
RP	SEQUENCE.	
CC	TISSUE=Pancreas;	
CC	MEDLINE=88257102; Pubmed=3260236;	
CC	Pollack H.G., Hamilton J.W., Rouse J.B., Rawitch A.B.;	
RA	"Isolation of peptide hormones from the pancreas of the bullfrog	
RT	(Rana catesbeiana). Amino acid sequences of pancreatic polypeptide,	
RT	oxyntomodulin, and two glucagon-like peptides.;"	
RL	J. Biol. Chem. 263:9746-9751(1988).	
CC	!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES	
CC	THE BLOOD SUGAR LEVEL.	
CC	!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS	
CC	IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.	
CC	!- MISCELLANEOUS: X S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH	
CC	OTHER SPECIES SEQUENCES.	
CC	!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.	
DR	HSSP; P01274; 16CN.	
DR	InterPro; IPR000532; Glucagon.	
DR	PRINTS; PRO0275; GLUCAGON.	
DR	SMART; SM00070; GLUCA; 3.	
DR	PROSITE; PS00260; GLUCAGON; 3.	
KW	Glucagon family; Hormone.	
FT	FT PEPTIDE	1 26
FT	FT PEPTIDE	1 36
FT	FT PEPTIDE	39 70
FT	FT NON_CONS	70 71
FT	FT PEPTIDE	71 103
FT	FT SEQUENCE	103 AA; 11719 MW; 316287B7BAELCSF7 CRC64;
Query Match		80.1%; Score 129; DB 1; Length 103;
Best Local Similarity		76.7%; Pred. No. 2.4e-11;
Matches	23; Conservative	5; Mismatches 2; Indels 0; Gaps

QY 1 HAEGETSDVSSYLEGQAAKEFIAMLYKGR 30
DB 39 HADGTTSDVSSYLEGQAAKEFIAMLYKGR 68

RESULT 12
GLOM_ANGAN STANDARD; PRT; 30 AA.
AC P41521;
DT 01-NOV-1995 (Rel. 32, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 15-SEP-2003 (Rel. 42, Last annotation update)
DE Glucagon-like peptide (GLP).
OS Anguilla anguilla (European freshwater eel), and
OS Anguilla rostrata (American eel).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
OC Anguilla.
OX NCBI_TaxID=7936, 7938;
RN [1]

RP SEQUENCE.
RC SPECIES=A. anguilla, and A. rostrata;
RC TISSUE=Pancreas;
RA MEDLINE=91340058; PubMed=1874385;
RA Conlon J.M., Andrews P.C., Thin L., Moon T.W.;
RT "The primary structure of glucagon-like peptide but not insulin has
RI been conserved between the American eel, Anguilla rostrata and the
RI European eel, Anguilla anguilla."
RL Gen. Comp. Endocrinol. 82:23-32(1991).
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR PIR; B61125; B61125.
DR PIR; C61125; C61125.
DR HSSP; P01275; LBHO.
DR InterPro: IPR000332; Glucagon.
DR Pfam: PF00123; hormone2; 1.
DR SMART: SM00070; GLUCA; 1.
DR PROSITE: PS00260; GLUCAGON; 1.
KW Glucagon family; Amidation.
FT MOD_RES 30
SQ SEQUENCE 30 AA; 3376 MW; 592DRSEN6E49D0 CRC64;

Query Match 78.3%; Score 126; DB 1; Length 30;
Best Local Similarity 76.7%; Pred. No. 1.8e-11;
Matches 23; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGETSDVSSYLEGQAAKEFIAMLYKGR 30
DB 1 HAEGETSDVSSYLEGQAAKEFIAMLYKGR 30

RESULT 13
GLO2_LOPAM STANDARD; PRT; 122 AA.
AC P04092;
DT 01-NOV-1986 (Rel. 03, Created)
DT 01-NOV-1986 (Rel. 03, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Glucagon II precursor [Contains: Glucagon-like peptide II]
DE Glucagon II; Glucagon-like peptide II.
OS Lophius americanus (American goosefish) (Anglerfish).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorphna; Paracanthopterygii; Lophiiformes; Lophidae;
OX NCBI_TaxID=8073;
RN [1]

RP SEQUENCE FROM N.A.
RX MEDLINE=83135785; PubMed=6338015;
RA Lund P.K., Goodman R.H., Montminy M.R., Dee P.C., Habener J.F.;
RT "Anglerfish islet pre-proglucagon II. Nucleotide and corresponding
RT amino acid sequence of the cDNA."
RL J. Biol. Chem. 258:3280-3284(1983).
RN [2]

RP PROCESSING.
RX MEDLINE=86286913; PubMed=3526301;
RA Noe B.D., Andrews P.C.;
RT "Specific glucagon-related peptides isolated from anglerfish islets
RT are metabolic cleavage products of (pre)proglucagon-II.";
RL Peptides 7:331-339(1986).
CC -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC THE BLOOD SUGAR LEVEL.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF Langerhans
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC
CC EMBL; V00632; CAA23905.1; .
CC PIR; A05150; GCAF2.
CC HSSP; P01274; IGCN.
CC InterPro: IPR000532; Glucagon.
CC Pfam: PF00123; hormone2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 2.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL 1 21
FT PEPTIDE 22 49 GLUCANTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 52 80 GLUCAGON II.
FT PROPEP 83 86
FT PEPTIDE 89 119 GLUCAGON-LIKE PEPTIDE II.
SQ SEQUENCE 122 AA; 14171 MW; 5140AC47EF915519 CRC64;

Query Match 78.3%; Score 126; DB 1; Length 122;
Best Local Similarity 71.0%; Pred. No. 7.5e-11;
Matches 22; Conservative 6; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGETSDVSSYLEGQAAKEFIAMLYKGR 31
DB 89 HADGTTSDVSSYLEGQAAKEFIAMLYKGR 119

RESULT 14
GLO1_XENLA STANDARD; PRT; 266 AA.
AC O42143;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DE Glucagon I precursor [Contains: Glucagon; Glucagon-like peptide 1A
DE (GLP-1A); Glucagon-like peptide 1B (GLP-1B); Glucagon-like peptide 1C
DE (GLP-1C); Glucagon-like peptide 2 (GLP-2)]
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]

RP SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC TISSUE=Pancreas;
RX MEDLINE=97368292; PubMed=9223287;
RA Irwin D.M., Satkunarajah M., Wen Y., Brubaker P.L., Pederson R.A.,
RA Wheeler M.B.;
RT "The Xenopus proglucagon gene encodes novel GLP-1-like peptides with
RT insulinotropic properties."
RL Proc. Natl. Acad. Sci. U.S.A. 94:7915-7920(1997).
CC -!- FUNCTION: Promotes hydrolysis of glycogen and lipids, and raises
CC the blood sugar level.
CC -!- ALTERNATIVE PRODUCTS.
CC Event-alternative splicing; Named isoforms=2;

```
CC Name-1;
CC IsoId=042143-1; Sequence=Displayed;
CC Name-2;
CC IsoId=042143-2; Sequence=VSP_001755;
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; AF004433; AAB65661.1; -.
CC DR HSSP; P01274; IGCN.
CC DR InterPro; IPR000532; Glucagon.
CC DR Pfam; PF00123; hormone2; 4.
CC DR PRINTS; PR00275; GLUCAGON.
CC DR SMART; SM00070; GLUCA; 5.
CC DR PROSITE; PS00260; GLUCAGON; 5.
CC KW Multigene family; Hormone; Signal; Cleavage on pair of basic residues;
CC MW Multigene family; Alternative splicing.
CC FT SIGNAL 1 20 POTENTIAL.
CC FT PROPEP 21 50 GLUCAGON.
CC FT PEPTIDE 53 81
CC FT PROPEP 84 95
CC FT PEPTIDE 97 133
CC FT PROPEP 136 140
CC FT PEPTIDE 142 172
CC FT PROPEP 175 178
CC FT PEPTIDE 180 210
CC FT PROPEP 213 219
CC FT VARSPLIC 214 261
CC SQ SEQUENCE 266 AA; 30951 MW; 544F7BEC20AF872C CRC64;
Query Match 77.6%; Score 125; DB 1; Length 266;
Best Local Similarity 70.0%; Pred. No. 2.3e-10;
Matches 21; Conservative 7; Mismatches 2; Indels 0; Gaps 0;
QY 1 HAEGTTSVSSYLEGQAQAEKFIAMLVKGR 30
DB 180 HAEGTFTNDMTNLYLEKKAKEFVGWLKGR 209
RESULT 15
GLU2_XENLA STANDARD; PRT; 219 AA.
AC C42144;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon II precursor [Contains: Glucagon; Glucagon-like peptide 1A
DE (GLP-1A); Glucagon-like peptide 1B (GLP-1B); Glucagon-like peptide 1C
DE (GLP-1C)].
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
CC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae; Pipidae;
CC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP SEQUENCE FROM N.A.
RT TISSUE=Pancreas;
RX MEDLINE=97368292; PubMed=9223287;
RA Irwin D.M., Satkunarajah M., Wen Y., Brubaker P.L., Pederson R.A.,
RA Wheeler M.B.;
RT "The Xenopus proglucagon gene encodes novel GLP-1-like peptides with
RT insulinotropic properties.";
RL Proc. Natl. Acad. Sci. U.S.A. 94:7915-7920(1997).
CC -!- FUNCTION: Promotes hydrolysis of glycogen and lipids, and raises
```

```
CC the blood sugar level.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; AF004433; AAB65661.1; -.
CC DR HSSP; P01274; IGCN.
CC DR InterPro; IPR000532; Glucagon.
CC DR Pfam; PF00123; hormone2; 4.
CC DR SMART; SM00070; GLUCA; 4.
CC DR PROSITE; PS00260; GLUCAGON; 3.
CC KW Multigene family; Hormone; Signal; Cleavage on pair of basic residues;
CC MW Multigene family.
CC FT SIGNAL 1 20 POTENTIAL.
CC FT PROPEP 21 50 GLUCAGON.
CC FT PEPTIDE 53 81
CC FT PROPEP 84 95
CC FT PEPTIDE 97 133
CC FT PROPEP 136 140
CC FT PEPTIDE 142 172
CC FT PROPEP 175 178
CC FT PEPTIDE 180 210
CC FT PROPEP 213 219
CC SQ SEQUENCE 219 AA; 25271 MW; ACC699233C362CE0 CRC64;
Query Match 74.5%; Score 120; DB 1; Length 219;
Best Local Similarity 66.7%; Pred. No. 9.6e-10;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;
QY 1 HAEGTTSVSSYLEGQAQAEKFIAMLVKGR 30
DB 180 HAEGTFTNDMTNLYLEKKAKEFVGWLKGR 209
Search completed: October 15, 2003, 10:53:38
Job time : 13.7213 secs
```

GenCore version 5.1.5
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:48:32 ; Search time 60.9836 Seconds
(without alignments)
131.177 Million cell updates/sec

Title: US-09-719-410-3
Perfect score: 161
Sequence: 1 HAEQFTSDVSSYLEGQAQKEFIAMLVKGRG 31

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 830525 seqs, 258052604 residues

Total number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

- Database: SPTREMBL23:*
- 1: sp_archaea:*
 - 2: sp_bacteria:*
 - 3: sp_fungi:*
 - 4: sp_human:*
 - 5: sp_invertebrate:*
 - 6: sp_mammal:*
 - 7: sp_mhc:*
 - 8: sp_organelle:*
 - 9: sp_phage:*
 - 10: sp_plant:*
 - 11: sp_protist:*
 - 12: sp_virus:*
 - 13: sp_vertebrate:*
 - 14: sp_unclassified:*
 - 15: sp_rvirus:*
 - 16: sp_bacteriap:*
 - 17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	161	100.0	176	6 Q8MJ25	Q8mj25 ovis aries
2	161	100.0	180	6 Q95LGO	Q95lgo canis faml
3	129	80.1	220	13 Q8UWLS	Q8uwls hoplobatr
4	118	73.3	72	13 Q91409	Q91409 oncorhynch
5	118	73.3	178	13 Q91971	Q91971 oncorhynch
6	113	70.2	178	13 Q91189	Q91189 oncorhynch
7	103	64.0	121	13 Q9DB26	Q9dbe6 brachydanio
8	90	55.9	96	13 Q9DG43	Q9dg43 ambloplites
9	67	41.6	130	11 Q9CVF1	Q9cvf1 mus musculu
10	67	41.6	144	11 Q9DB87	Q9db87 mus musculu
11	60	37.3	170	6 Q8NI77	Q8ni77 bos taurus
12	59	36.6	171	11 Q9DZ27	Q9dz27 mus musculu
13	59	36.6	389	2 Q93IH2	Q93ih2 wolinnella s
14	54	33.5	172	13 Q9DE29	Q9de29 brachydanio
15	53.5	33.2	175	13 Q9OX24	Q9ox24 ictalurus p
16	53	32.9	170	11 Q8BJT8	Q8bjt8 mus musculu

17	52.5	32.6	224	16 Q8XW49	Q8xw49 ralstonia s
18	52.5	32.6	427	17 Q8TLX0	Q8tlx0 methanosarc
19	52	32.3	38	5 Q8IU39	Q8iu39 dugesia jap
20	52	32.3	38	5 Q8IU38	Q8iu38 hydra magni
21	52	32.3	38	5 Q8IU37	Q8iu37 septocenthi
22	52	32.3	38	5 Q8IU36	Q8iu36 periplaneta
23	52	32.3	38	13 Q8AYP5	Q8ayp5 trachurus j
24	52	32.3	38	13 Q8AYP4	Q8ayp4 acipenser s
25	52	32.3	138	13 Q98SP4	Q98sp4 oncorhynch
26	52	32.3	171	13 Q9PUF8	Q9puf8 xenopus lae
27	52	32.3	173	13 Q98SP5	Q98sp5 oncorhynch
28	51.5	32.0	285	17 Q8TPJ9	Q8tpj9 methanosarc
29	51	31.7	89	13 Q98SP6	Q98sp6 anas platyr
30	51	31.7	352	5 Q9XG1	Q9xxl caenorhabdi
31	51	31.7	810	4 Q9WY8	Q9wt8 homo sapien
32	51	31.7	867	4 Q9UFX9	Q9utx9 homo sapien
33	50.5	31.4	175	13 Q98TU3	Q98tu3 brachydanio
34	50.5	31.4	210	5 Q95XL4	Q95xl4 caenorhabdi
35	50.5	31.4	372	10 Q9XFW9	Q9xw9 cicor ariet
36	50	31.1	171	10 Q9FGY5	Q9fgy5 arabidopsis
37	50	31.1	185	11 Q8C0Y4	Q8c0y4 mus musculu
38	50	31.1	244	16 Q82I05	Q82lu5 salmonella
39	50	31.1	302	16 Q9K3M4	Q9k3m4 streptomyce
40	50	31.1	331	5 Q18301	Q18301 caenorhabdi
41	50	31.1	366	11 Q9WTM1	Q9wtm1 mus musculu
42	50	31.1	401	11 Q9D9E0	Q9d9e0 mus musculu
43	50	31.1	1003	5 Q8IAC0	Q8iac0 halocynthia
44	49.5	30.7	285	17 Q8Q0X5	Q8q0x5 methanosarc
45	49.5	30.7	378	5 Q25062	Q25062 hydractinia

ALIGNMENTS

RESULT 1

Q8MJ25 AC Q8MJ25 PRELIMINARY; PRP; 176 AA.

DT 01-OCT-2002 (IREMBLrel. 22, Created)

DT 01-OCT-2002 (IREMBLrel. 22, Last sequence update)

DT 01-MAR-2003 (IREMBLrel. 23, Last annotation update)

DE Preproglucagon (Fragment).

OS Ovis aries (Sheep).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;

OC Bovidae; Caprinae; Ovis.

OX NCBI_taxid=3940;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=Pancreas;

RA Limesand S.W., Hay W.W. Jr.;

RT "Characterization of the endocrine pancreas in an ovine placental

RL Insufficiency IUGR fetus.";

RL Submitted (JUL-2002) to the ENBL/GenBank/DBJ databases.

DR EMEL; AF529185; AM94409.1; "

DR InterPro; IPR000532; Glucagon.

DR Fram; PF00123; hormone2; 3.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 3.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 176 176

SQ SEQUENCE 176 AA; 20335 MW; 13174039BD6CE2B3 CRC64;

Query Match 100.0%; Score 161; DB 6; Length 176;

Best Local Similarity 100.0%; Pred No. 3.le-16;

Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HAEQFTSDVSSYLEGQAQKEFIAMLVKGRG 31

Db 98 HAEQFTSDVSSYLEGQAQKEFIAMLVKGRG 128

RESULT 2

Q95L60
ID Q95L60 PRELIMINARY; PRT; 180 AA.
AC Q95L60;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DE 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Preproglucagon.
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutharia; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA Irwin D.M.; Wong J.;
RT "cDNA cloning of proglucagon from the stomach and pancreas of the dog."
RL Submitted (SPP-2000) to the EMBL/Genbank/DDAJ databases.
DR EMBL; AF308439; AAL09425.1; -.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM0070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 2.
SQ SEQUENCE 180 AA; 21114 MW; 80F66941AFC324FD CRC64;
Query Match 100.0%; Score 161; DB 6; Length 180;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSYLEGQAKEFIAMLVKGR 31
DB 98 HAEGTFTSDVSYLEGQAKEFIAMLVKGR 128
RESULT 3
Q8UWL9
ID Q8UWL9 PRELIMINARY; PRT; 220 AA.
AC Q8UWL9;
DT 01-MAR-2002 (TrEMBLrel. 20, Created)
DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DE 01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE Proglucagon.
OS Hoplobatrachus rugulosus.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Neobatrachia; Ranoidae; Ranidae;
OC Hoplobatrachus.
OX NCBI_TaxID=110072;
RN [1]
RP SEQUENCE FROM N.A.
RA Yeung C.-M.; Chow B.K.C.;
RT "Identification of a proglucagon cDNA from Rana tigrina rugulosa that encodes two GIP-1s."
RL Gen. Comp. Endocrinol. 124:0-0(2001).
DR EMBL; AF324209; AAL3758.1; -.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 4.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM0070; GLUCA; 4.
DR PROSITE; PS00260; GLUCAGON; 4.
SQ SEQUENCE 220 AA; 25615 MW; C72D926E7F89E381 CRC64;
Query Match 80.18; Score 129; DB 13; Length 220;
Best Local Similarity 76.78; Pred. No. 2.9e-11;
Matches 23; Conservative 5; Mismatches 2; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSYLEGQAKEFIAMLVKGR 30
DB 135 HAEGTFTSDVSYLEFKAKEFVWLKGR 164
RESULT 4
Q91409
ID Q91409 PRELIMINARY; PRT; 72 AA.
AC Q91409;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DE 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE PROGLUCAGON (Fragment).
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RA Irwin D.M.; Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2."
RL Mol. Endocrinol. 9:267-277(1995).
DR EMBL; S78474; AAD14283.1; -.
DR EMBL; U19920; AAC59670.1; -.
DR HSSP; P01274; IGCN.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR SMART; SM0070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 1.
FT NON_TER
SQ SEQUENCE 72 AA; 8293 MW; 8584352B1C260A31 CRC64;
Query Match 73.38; Score 118; DB 13; Length 72;
Best Local Similarity 66.78; Pred. No. 3.5e-10;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSYLEGQAKEFIAMLVKGR 30
DB 39 HAEGTFTSDVSYLQDQAADFVSLKSGR 68
RESULT 5
Q91971
ID Q91971 PRELIMINARY; PRT; 176 AA.
AC Q91971; Q91408; Q9188; Q92169;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DE 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE Glucagon I precursor.
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RN [1]
RP SEQUENCE FROM N.A.; AND ALTERNATIVE SPLICING.
RC ISSUR-DISTAL SMALL INTESTINE, AND PANCREAS;
RA Irwin D.M.; Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2."
RL Mol. Endocrinol. 9:267-277(1995).
CC -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) AND PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR EMBL; U19913; AAC59667.1; -.
DR EMBL; U19917; AAC59669.1; -.
DR EMBL; U19918; AAC60212.1; -.
DR EMBL; U19919; AAC60213.1; -.
DR EMBL; U19918; AAC60213.1; JOINED.
DR EMBL; S78475; AAB34505.1; -.
DR HSSP; P01274; IGCN.
DR InterPro: IPR000532; Glucagon.

Q91409; Q91232;
AC Q91409;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DE 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE PROGLUCAGON (Fragment).
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RA Irwin D.M.; Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2."
RL Mol. Endocrinol. 9:267-277(1995).
DR EMBL; S78474; AAD14283.1; -.
DR EMBL; U19920; AAC59670.1; -.
DR HSSP; P01274; IGCN.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR SMART; SM0070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 1.
FT NON_TER
SQ SEQUENCE 72 AA; 8293 MW; 8584352B1C260A31 CRC64;
Query Match 73.38; Score 118; DB 13; Length 72;
Best Local Similarity 66.78; Pred. No. 3.5e-10;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSYLEGQAKEFIAMLVKGR 30
DB 39 HAEGTFTSDVSYLQDQAADFVSLKSGR 68
RESULT 5
Q91971
ID Q91971 PRELIMINARY; PRT; 176 AA.
AC Q91971; Q91408; Q9188; Q92169;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DE 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE Glucagon I precursor.
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RN [1]
RP SEQUENCE FROM N.A.; AND ALTERNATIVE SPLICING.
RC ISSUR-DISTAL SMALL INTESTINE, AND PANCREAS;
RA Irwin D.M.; Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2."
RL Mol. Endocrinol. 9:267-277(1995).
CC -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) AND PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR EMBL; U19913; AAC59667.1; -.
DR EMBL; U19917; AAC59669.1; -.
DR EMBL; U19918; AAC60212.1; -.
DR EMBL; U19919; AAC60213.1; -.
DR EMBL; U19918; AAC60213.1; JOINED.
DR EMBL; S78475; AAB34505.1; -.
DR HSSP; P01274; IGCN.
DR InterPro: IPR000532; Glucagon.

DR Pfam: PF00123; hormone2; 3.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUCA; 3.
DR PROSITE: PS00260; GLUCAGN; 3.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Alternative splicing; Multigene family.
FT SIGNAL 1 ? POTENTIAL.
FT PEPTIDE ? 49 GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT PEPTIDE 52 80 GLUCAGON.
FT PEPTIDE 85 120 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 137 169 GLUCAGON-LIKE PEPTIDE 2.
FT VARSPLIC 124 178 MISSING (IN PANCREATIC ISOFORM).
SQ SEQUENCE 178 AA; 20034 MW; 5CF6980CF2A9D58E CRC64;

Query Match 73.3%; Score 118; DB 13; Length 178;
Best Local Similarity 66.7%; Pred. NO. 1e-09; 3; Indels 0; Gaps 0;
Matches 20; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
DB 90 HADGTYTSDVSYLQDQAQKDFVSWLKSGR 119

RESULT 6

Q91189 PRELIMINARY; PRT; 178 AA.
AC Q91189; 092158;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DI 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Glucagon II precursor.
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
FN [1]
RP SEQUENCE FROM N.A. AND ALTERNATIVE SPLICING.
RC TISSUE-DISTAL SMALL INTESTINE, AND PANCREAS;
RX MEDLINE=95295739; PubMed=7776976;
RA Irwin D.M., Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2.";
RL Mol. Endocrinol. 9:267-277(1995).
CC -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) AND PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR EMBL; U19914; AAC59668.1; -.
DR EMBL; U19916; AAC60210.1; -.
DR EMBL; U19915; AAC60210.1; JOINED.
DR EMBL; U19915; AAC60209.1; -.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGN; 2.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Alternative splicing; Multigene family.
FT SIGNAL 1 ? POTENTIAL.
FT PEPTIDE ? 49 GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT PEPTIDE 52 80 GLUCAGON.
FT PEPTIDE 85 120 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 137 169 GLUCAGON-LIKE PEPTIDE 2.
FT VARSPLIC 124 178 MISSING (IN PANCREATIC ISOFORM).
SQ SEQUENCE 178 AA; 19998 MW; E89D73866CD91C56 CRC64;

Query Match 70.2%; Score 113; DB 13; Length 178;
Best Local Similarity 65.5%; Pred. NO. 5.9e-09;
Matches 19; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 29
DB 90 HADGTYTSDVSYLQDQAQKDFVSWLKS 118

RESULT 7

Q9DD66 PRELIMINARY; PRT; 121 AA.
ID Q9DD66;
AC Q9DD66;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DI 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE Glucagon polypeptide.
GN GCG OR GLJ.
OS Brachydanio rerio (Zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
OX NCBI_TaxID=7955;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=99425190; PubMed=10495291;
RA Argenton F., Zecchin E., Bortolussi M.;
RT "Early appearance of pancreatic hormone-expressing cells in the zebrafish embryo.";
RL Mech. Dev. 87:217-221(1999).
DR EMBL; AJ133697; CAC20108.1; -.
DR HSSP; P01274; IGCN.
DR ZFIN; ZDB-GENE-010219-1; gcg.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR PRINTS; PR00275; GLUCAGN.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGN; 2.
KW Polypeptide. 49 79 GLUCAGON.
FT CHAIN 88 121 GLUCAGON-LIKE PEPTIDE 1.
FT CHAIN 121 AA; 13537 MW; AH5385F690DA180F CRC64;
SQ SEQUENCE 121 AA; 13537 MW; AH5385F690DA180F CRC64;

Query Match 64.0%; Score 103; DB 13; Length 121;
Best Local Similarity 56.7%; Pred. NO. 1.2e-07;
Matches 20; Conservative 5; Mismatches 5; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
DB 88 HAEGTFTSDVSSYLEGQAAQRFVFLKSGQ 117

RESULT 8
Q9DG43 PRELIMINARY; PRT; 96 AA.
ID Q9DG43;
AC Q9DG43;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DI 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE Proglucagon (Fragment).
OS Ambloplites rupestris (Rock bass).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
OC Centrarchidae; Ambloplites.
OX NCBI_TaxID=109273;
RN [1]
RP SEQUENCE FROM N.A.
RA Al-Mahrouki A.A., Irwin D.M., Youson J.H.;
RT "Rock Bass Proglucagon.";
RL Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF190459; AAG16778.1; -.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR PRINTS; PR00275; GLUCAGN.

DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 1.
FT NON TER 1 1
FT CHAIN 1 >29 GLUCAGON.
FT CHAIN 39 >70 GLUCAGON-LIKE PEPTIDE 1.
FT CHAIN 86 >96 GLUCAGON-LIKE PEPTIDE 2.
FT CHAIN 96 96
FT NON TER 96
SQ SEQUENCE 96 AA; 11225 MW; 6435033EBDDC00CE CRC64;

Query Match
Best Local Similarity 55.9%; Score 90; DB 13; Length 96;
Matches 14; Conservative 10; Mismatches 6; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30
:|||||:||||:||||:||||:||||:||||:
Db 1 HSGGFTNDYNTYLEDQAQDFIRWLNNK 30
:|||||:||||:||||:||||:||||:||||:

RESULT 9
Q9CVF1 PRELIMINARY; PRT; 130 AA.
AC Q9CVF1
DT 01-JUN-2001 (TRENBLrel. 17, Created)
DT 01-JUN-2001 (TRENBLrel. 17, Last sequence update)
DT 01-DEC-2001 (TRENBLrel. 19, Last annotation update)
DE Gastric inhibitory polypeptide (fragment).
GN GIP.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Small intestine;
RX MEDLINE=21085660; PubMed=11217851;
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
RA Saito T., Okazaki Y., Gojohori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wyshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohsaki S.,
RA Hayashizaki Y.,
RA "Functional annotation of a full-length mouse cDNA collection."
RL Nature 409:685-690(2001).
DR EMBL; AK008525; BAB25720.1; -.
DR HSSP; P01274; IGCN.
DR MGD; MGI:107504; Gip.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 1.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
FT NON TER 1 1
SQ SEQUENCE 130 AA; 14905 MW; 95B3B5E91E2A7992 CRC64;

Query Match
Best Local Similarity 41.6%; Score 67; DB 11; Length 130;
Matches 13; Conservative 7; Mismatches 11; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 31
:|||||:||||:||||:||||:||||:||||:
Db 30 YAGSTFTSDYNTDKIRQDFVNWLLAQRG 60
:|||||:||||:||||:||||:||||:||||:

RESULT 10
Q9D887 PRELIMINARY; PRT; 144 AA.
AC Q9D887
DT 01-JUN-2001 (TRENBLrel. 17, Created)
DT 01-JUN-2001 (TRENBLrel. 17, Last sequence update)
DT 01-DEC-2001 (TRENBLrel. 19, Last annotation update)
DE Gastric inhibitory polypeptide.
GN GIP.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Small intestine;
RX MEDLINE=21085660; PubMed=11217851;
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
RA Saito T., Okazaki Y., Gojohori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wyshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohsaki S.,
RA Hayashizaki Y.,
RA "Functional annotation of a full-length mouse cDNA collection."
RL Nature 409:685-690(2001).
DR EMBL; AK008308; BAB25592.1; -.
DR HSSP; P01274; IGCN.
DR MGD; MGI:107504; Gip.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 1.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
SQ SEQUENCE 144 AA; 16389 MW; 36B618665D4DA9C3 CRC64;

Query Match
Best Local Similarity 41.6%; Score 67; DB 11; Length 144;
Matches 13; Conservative 7; Mismatches 11; Indels 0; Gaps 0;

Qy 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 31
:|||||:||||:||||:||||:||||:||||:
Db 44 YAGSTFTSDYNTDKIRQDFVNWLLAQRG 74
:|||||:||||:||||:||||:||||:||||:

RESULT 11
Q8MI77 PRELIMINARY; PRT; 170 AA.
AC Q8MI77
DT 01-OCT-2002 (TRENBLrel. 22, Created)
DT 01-OCT-2002 (TRENBLrel. 22, Last sequence update)
DT 01-MAR-2003 (TRENBLrel. 23, Last annotation update)
DE Vasoreactive intestinal polypeptide precursor.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=22092342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;

RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:3310-3320(2002).
DR EMBL; AF503910; AM28152.1; -.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW signal.
FT SIGNAL 1 22 POTENTIAL.
FT CHAIN 81 107 PHI.
FT CHAIN 125 152 VIP.
FT CHAIN 170 AA; 19164 MW; 966A5049A7BFF81 CRC64;
SQ SEQUENCE 170 AA; 19164 MW; 966A5049A7BFF81 CRC64;

Query Match 37.3%; Score 50; DB 6; Length 170;
Best Local Similarity 43.3%; Pred. No. 0.61;
Matches 13; Conservative 6; Mismatches 11; Indels 0; Gaps 0;

QY 1 HAEFTFTSDVSSYLEGQAAKEFIAMLVKGR 30
DB 81 HADGVFTSDYSLQLGQSAKKYLSLIGKR 110

RESULT 12
Q9DZ27 PRELIMINARY; PRT; 171 AA.
AC Q9DZ27;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT 01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE Vasoactive intestinal polypeptide.
GN VIP.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Cecum;
RX MEDLINE=21085660; PubMed=11217851;
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaoka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochira E.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.W., Staudli F., Suzuki K., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Botjunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohsaki S.,
RA Hayashizaki Y.;
RT "Functional annotation of a full-length mouse cDNA collection.";
RL Nature 409:685-690(2001).
DR EMBL; AK018599; BAB31301.1; -.
DR MGD; MGI:98933; Vip.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
SQ SEQUENCE 171 AA; 19135 MW; 13A434DB6DF1254 CRC64;

Query Match 36.6%; Score 59; DB 11; Length 171;
Best Local Similarity 43.3%; Pred. No. 0.87;
Matches 13; Conservative 6; Mismatches 11; Indels 0; Gaps 0;

Matches 13; Conservative 6; Mismatches 11; Indels 0; Gaps 0;

QY 1 HAEFTFTSDVSSYLEGQAAKEFIAMLVKGR 30
DB 82 HADGVFTSDYSLQLGQSAKKYLSLIGKR 111

RESULT 13
Q93IH2 PRELIMINARY; PRT; 389 AA.
AC Q93IH2;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Sulfur transferase precursor.
GN STRA.
OS Wolinella succinogenes.
OC Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales;
OC Helicobacteraceae; Wolinella.
OX NCBI_TaxID=844;
RN [1]
RP SEQUENCE FROM N.A.
RA Schneider P.V., Simon J., Klimmek O.;
RT "The sulfur transferase of Wolinella succinogenes.";
RL Submitted (AUG-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AJ18789; CAC50085.1; -.
DR InterPro: IPR001763; Rhodanese-like.
DR Pfam; PF00581; Rhodanese; 2.
DR SMART; SM00450; RHOD; 3.
DR SIGNAL; Transferase.
FT SIGNAL 1 21 POTENTIAL.
FT CHAIN 22 389 SULFUR TRANSFERASE.
SQ SEQUENCE 389 AA; 41949 MW; 6C60850CAD9C4B9C CRC64;

Query Match 36.6%; Score 59; DB 2; Length 389;
Best Local Similarity 39.3%; Pred. No. 2.3;
Matches 11; Conservative 8; Mismatches 9; Indels 0; Gaps 0;

QY 1 HAEFTFTSDVSSYLEGQAAKEFIAMLVK 28
DB 314 HAKGKFAAGSINIEKKGKSAQDFVALLPK 341

RESULT 14
Q9DE29 PRELIMINARY; PRT; 172 AA.
AC Q9DE29;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Growth hormone-releasing hormone/pituitary adenylate cyclase-
DE activating polypeptide.
GN ADCYAP1.
OS Brachydanio rerio (Zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
OX NCBI_TaxID=7955;
RN [1]
RP SEQUENCE FROM N.A.
RA Fradinger E.A., Sherwood N.M.;
RT "Characterization of the gene encoding both growth hormone-releasing
RT hormone (GRF) and pituitary adenylate cyclase-activating polypeptide
RT (PACAP) in the zebrafish.";
RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF217251; AAG36782.1; -.
DR ZFIN; ZDB-GENE-020809-4; adcyap1.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
SQ CHAIN 81 125 GROWTH HORMONE-RELEASING HORMONE.

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:33:21 ; Search time 59.5082 Seconds
(without alignments)
80,019 Million cell updates/sec

Title: US-09-719-410-4

Perfect score: 155

Sequence: 1 HAEGETSDVSYLLEGGAAKEPIAWLVKGR 30

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Vatch 0%

Maximum Vatch 100%

Listing first 45 summaries

Database :

- 1: A_Geneseq_19Jun03.*
- 2: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1980.DAT.*
- 3: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1981.DAT.*
- 4: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1982.DAT.*
- 5: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1983.DAT.*
- 6: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1984.DAT.*
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- 9: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1987.DAT.*
- 10: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1988.DAT.*
- 11: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1990.DAT.*
- 12: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1991.DAT.*
- 13: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1992.DAT.*
- 14: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1993.DAT.*
- 15: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1994.DAT.*
- 16: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1995.DAT.*
- 17: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1996.DAT.*
- 18: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1997.DAT.*
- 19: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1998.DAT.*
- 20: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA1999.DAT.*
- 21: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA2000.DAT.*
- 22: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA2001.DAT.*
- 23: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA2002.DAT.*
- 24: /SIDSL/gcgdata/geneseq/geneseq-emb1/AA2003.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	155	100.0	30	AA19435	Insulinotropin der
2	155	100.0	30	AA19435	Insulinotropin (GL
3	155	100.0	30	AA19435	Amidated Glucagon
4	155	100.0	30	AA19435	Glucagon like pept
5	155	100.0	30	AA19435	Human glucagon lik
6	155	100.0	30	AA19435	Target peptide (GL
7	155	100.0	30	AA19435	GLP(7-35)-NH2. S
8	155	100.0	30	AA19435	Glucagon-like pept
9	155	100.0	30	AA19435	Glucagon-like pept

10	155	100.0	30	AA19435	GLP-1(7-36). Homo
11	155	100.0	30	AA19435	Glucagon-like pept
12	155	100.0	30	AA19435	Glucagon-like pept
13	155	100.0	30	AA19435	Glucagon-like pept
14	155	100.0	30	AA19435	Glucagon-like pept
15	155	100.0	30	AA19435	GLP-1 mutant pept
16	155	100.0	30	AA19435	Glucagon-like pept
17	155	100.0	30	AA19435	GLP-1-like peptide
18	155	100.0	30	AA19435	Amino acid sequenc
19	155	100.0	30	AA19435	GLP-1 peptide SEQ
20	155	100.0	30	AA19435	GLP-1 peptide GLP-
21	155	100.0	30	AA19435	Human glucagon-lik
22	155	100.0	30	AA19435	Modified Glucagon
23	155	100.0	30	AA19435	Modified Glucagon
24	155	100.0	30	AA19435	Modified Glucagon
25	155	100.0	30	AA19435	Glucagon-like pept
26	155	100.0	30	AA19435	Glucagon-like pept
27	155	100.0	30	AA19435	Mammalian glucagon
28	155	100.0	30	AA19435	Human glucagon-lik
29	155	100.0	30	AA19435	An insoluble gluca
30	155	100.0	30	AA19435	Glucagon-like pept
31	155	100.0	30	AA19435	GLP-1 peptide #2
32	155	100.0	30	AA19435	GLP-1. Unidentifi
33	155	100.0	30	AA19435	Pancreatic hormone
34	155	100.0	30	AA19435	Pancreatic hormone
35	155	100.0	30	AA19435	Human glucagon-lik
36	155	100.0	30	AA19435	Glucagon-like pept
37	155	100.0	30	AA19435	Glucagon-like pept
38	155	100.0	30	AA19435	Glucagon-like pept
39	155	100.0	30	AA19435	Glucagon-like pept
40	155	100.0	30	AA19435	Insulinotropic hor
41	155	100.0	30	AA19435	Human glucagon-lik
42	155	100.0	30	AA19435	Glucagon-like pept
43	155	100.0	30	AA19435	Glucagon like pept
44	155	100.0	30	AA19435	Mammalian glucagon
45	155	100.0	30	AA19435	Glucagon-like pept

ALIGNMENTS

RESULT 1
ID AAR45435 standard; protein; 30 AA.
AC AAR45435;
DT 25-MAR-2003 (updated)
DT 27-JUN-1994 (first entry)
XX
DE Insulinotropin derivative.
XX
KW Insulinotropic; activity; enhancing insulin activity; treatment:
KW Type II diabetes.
XX
OS Synthetic.
PN WO9325579-A1.
XX
PD 23-DEC-1993.
XX
PF 14-APR-1993; 93WO-US03388.
XX
PR 15-JUN-1992; 92US-0899073.
XX
PA (PF12) PFIZER INC.
XX
PI Andrews GC, Daumy GC, Francoeur ML, Larson ER;
XX
DR WFI; 1994-007457/01.
XX
PT New derivs. of glucagon-like peptide 1 and insulinotropin - used for
PT enhancing insulin action in a mammal, partic. by iontophoretic admin.

XX PS Claim 3; Page 20; 32pp; English.
XX CC The sequence is that of a derivative of insulinotropin which
CC has insulinotropic activity and is useful for enhancing insulin
CC action in a mammal, partic. for treating Type II diabetes
CC (claimed). It is partic. suited for delivery to a mammal by
CC ionophoresis.
CC (Updated on 25-MAR-2003 to correct PN field.)
XX SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 15; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGR 30
|||||
DB 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGR 30

RESULT 2
AAR63247
ID AAR63247 standard; peptide; 30 AA.
AC AAR63247;
XX 25-MAR-2003 (updated)
DT 02-MAY-1995 (first entry)
XX Insulinotropin (GLP-1(7-36)) for use in treating NIDDM.
DE insulinotropic activity; GLP-1; glucagon-like protein 1; NIDDM;
KW non-insulin dependent diabetes mellitus; insulinotropin; truncated.
XX Synthetic.
OS EP619322-R2.
PN 12-OCT-1994.
PD 10-FEB-1994; 94EP-0300981.
PF 07-APR-1993; 93US-0044133.
PR (PF12) PFIZER INC.
PA (SCIO-) SCIOS INC.
XX Danley DE, Gelfand RA, Geodhegan KF, Kim Y, Lambert NJ;
PI Qi H, Oih, Hong Q, Yesook K;
XX WPI; 1994-311774/39.
XX Treatment of non-insulin dependent diabetes mellitus - using a
PT glucagon-like peptide 1 or deriv. with prolonged action for
PT sustained glycaemic control
XX Claim 2; Page 46; 70pp; English.
XX This peptide is GLP-1(7-36) (GLP = glucagon-like peptide), a truncated
CC deriv. of GLP-1. GLP-1 and its deriv.s are useful in the treatment of
CC Non-insulin dependent diabetes mellitus (NIDDM). During processing in
CC the pancreas and intestine, GLP-1 (AAR63245) is converted to a 31 amino
CC acid peptide having amino acids 7-37 of GLP-1, alternatively referred
CC to as insulinotropin. GLP-1(7-37) has insulinotropic activity, ie. it
CC is able to stimulate, or cause to be stimulated, the synthesis of the
CC hormone insulin. Other derivs. of GLP-1 are shown in AAR63245-51. It
CC has been discovered that prolonged plasma elevations of GLP-1, and
CC related polypeptides, are necessary during the meal and beyond to
CC achieve sustained glycaemic control in patients with NIDDM. The invention
CC provides a compen. that has prolonged action after each administration.
CC (Updated on 25-MAR-2003 to correct PN field.)
CC (Updated on 25-MAR-2003 to correct PA field.)

XX SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 15; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGR 30
|||||
DB 1 HAEGETFTSDVSSYLEGQAQAKEFIANLVKGR 30

RESULT 3
AAR69063
ID AAR69063 standard; peptide; 30 AA.
XX AAR69063;
AC 25-MAR-2003 (updated)
DT 23-AUG-1995 (first entry)
XX Amidated Glucagon like peptide 1 (GLP1) (7-36)-NH2.
DE Glucagon Like Peptide; GLP; transpeptidation; endopeptidase;
KW trypsin; thrombin; cleavage.
XX Synthetic.
OS Key Location/Qualifiers
FH Modified-site 30
FT /label= Arg-NH2
XX WO9503405-A2.
PN 02-FEB-1995.
XX 19-JUL-1994; 94WO-US08125.
PF 20-JUL-1993; 93US-0095162.
PR (BION-) BIONEERASKA INC.
PA Henriksen D, Manning S, Partridge B, Stout J, Wagner FW;
PI WPI; 1995-075233/10.
XX Transpeptidation of recombinant polypeptides - using
PT endopeptidase such as trypsin or thrombin to modify C-terminal
PT residue.
XX Claim 33; Page 50; 69pp; English.
XX The naturally occurring sequence of Glucagon Like Peptide 1 (GLP1)
CC is AAR69072. It is a 36 AA peptide that has been recombinantly
CC produced but without a mechanism for providing for the amidation of
CC the C-terminal Arg residue. Amidated recombinant GLP1 (7-36)NH2
CC (AAR69063) was prepd. from a multicopy fusion protein contg. four
CC copies of a modified truncated GLP peptide having AA residues 7-34
CC of the native polypeptide and the terminal AA residues A-F-A at
CC residues 35-37 (GLP1 (7-34)-A-F-A) (AAR69064). The recombinant GLP1 (7-
CC 34)-A-F-A can be transpeptidated to yield the modified recombinant
CC native GLP1 (7-36)-NH2 (AAR69063) as follows. Trypsin was used to
CC cleave the peptide at the Lys-Ala bond in the presence of either
CC Gly-Arg-NH2 or Gly-Arg-Gly addition units so that the cleavage of
CC the Ala-Phe-Arg leaving unit is followed by the addition of
CC Gly-Arg-NH2 or Gly-Arg-Gly to the core GLP1 (7-34) to yield either
CC amidated 7-36 GLP1-NH2 or GLP1 7-36 with a terminal Gly (AAR69065).
CC (Updated on 25-MAR-2003 to correct PN field.)
XX SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 16; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30
|||||
Db 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30

RESULT 4
AAR79809
ID AAR79809 standard; peptide; 30 AA.
XX AC AAR79809;
XX DT 01-FEB-1996 (first entry)
XX DE Glucagon like peptide GLP-1 (7-36)amide.
XX KW Glucagon like peptide; GLP-1 (7-36)amide; type II diabetes;
XX KW non-insulin dependent; divalent metal cation; zinc.
XX OS Synthetic.
XX FH Key Location/Qualifiers
XX FT Modified-site 30
XX FT /note= "amidated"
XX PN EP658568-A1.
XX PD 21-JUN-1995.
XX PF 02-DEC-1994; 94EP-0308950.
XX PR 09-DEC-1993; 93US-0164277.
XX XX (ELIL) LILLY & CO ELI.
XX PA Galloway JA, Hoffmann JA;
XX PI WPI; 1995-217011/29.
XX DR New divalent metal complexes of glucagon-like peptide 1 - useful for
XX PT treating type II diabetes
XX PS Claim 4; Page 4; 10pp; English.
XX CC AAR79809 is the glucagon like peptide GLP-1 (7-36)amide. When
XX CC complexed to a divalent metal cation (pref. zinc) it can be
XX CC used to treat type II (non-insulin dependent) diabetes.
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 16; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30
|||||
Db 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30

RESULT 5
AAR80548
ID AAR80548 standard; peptide; 30 AA.
XX AC AAR80548;
XX DT 28-FEB-1996 (first entry)
XX DE Human glucagon like peptide (GLP-1).
XX KW Exendin-4; diabetes mellitus; hyperglycaemia;
XX KW insulinotropic peptide; glucagon like peptide; GLP-1.
XX

OS Homo sapiens.
XX US5424286-A.
XX PN 13-JUN-1995.
XX PD 24-MAY-1993; 93US-0066480.
XX PF 24-MAY-1993; 93US-0066480.
XX PR (ENGJ/) ENG J.
XX PA Eng J;
XX PI WPI; 1995-262627/34.
XX DR Stimulating/inhibiting insulin release with exendin polypeptide(s) -
XX FT for treating diabetes mellitus and preventing hyperglycaemia.
XX PS Disclosure; Columns 5-6; 17pp; English.
XX CC AAR80548 is the human glucagon like peptide (GLP-1), to which the
XX CC Heloderma horridum/suspectum exendin-3/-4 peptides are analogous.
XX CC The exendin peptides are insulinotropic, and can therefore be used
XX CC in the treatment of diabetes mellitus (types I or II), and for the
XX CC prevention of hyperglycaemia.
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 16; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30
|||||
Db 1 HAEGTFTSDVSSYLEGQAAKEFIAWLKGR 30

RESULT 6
AAR98956
ID AAR98956 standard; peptide; 30 AA.
XX AC AAR98956;
XX DT 15-JAN-1997 (first entry)
XX DE Target peptide (GLP1(7-36)) used in fusion protein construct.
XX KW Fusion protein construct; isolation; purification;
XX KW growth hormone releasing factor; glucagon-like peptide 1;
XX KW parathyroid hormone; inclusion body; carbonic anhydrase.
XX OS Synthetic.
XX PN WO9617942-A1.
XX PD 13-JUN-1996.
XX PF 07-DEC-1995; 95WO-US15800.
XX PR 07-DEC-1994; 94US-0350530.
XX PA (BION-) BIONEERASKA INC.
XX PI De LA MOTTE RS, Henriksen DE, Holmquist B, Manning SD;
XX PI Partridge BE, Stout JS, Wagner RW;
XX DR WPI; 1996-287186/29.
XX FT Isolation and purificn of peptide(s) from fusion protein constructs
XX FT - which include a carbonic anhydrase and a variable fused
XX FT polypeptide
XX

PS Claim 58; Page 50; 67pp; English.

XX A new method for the isolation and/or purification of a recombinant

CC peptide employs a fusion protein construct (FPC) comprising a

CC carbonic anhydrase and a variable fused polypeptide containing a

CC target peptide. The method comprises precipitating either the FPC or

CC a fragment of the FPC including the carbonic anhydrase. An

CC alternative method of producing the peptide comprises expressing the

CC FPC as part of an inclusion body. The target peptides of the FPC are

CC derived from growth hormone releasing factor (GRF), glucagon-like

CC peptide 1 (GLP1) or parathyroid hormone (PTH). This sequence

CC corresponds to amino acids 7-36 of GLP1.

XX

SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 17; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

DB 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

RESULT 7

AAR98975

ID AAR98975 standard; Peptide; 30 AA.

XX

AC AAR98975;

XX

DT 03-DEC-1996 (first entry)

XX

DE GLP1(7-35)-NH2.

XX

XX GLP1; C-amide; C-amidated peptide; alpha-carboxamide;

KW recombinant protein; fusion protein; transpeptidation.

XX

OS Synthetic.

XX

PH Key Location/Qualifiers

FT Modified-site 30 /note= "C-terminal amide"

FT

XX

PN WO9617941-A2.

XX

PD 13-JUN-1996.

XX

PF 07-DEC-1995; 95WO-US15799.

XX

PR 07-DEC-1994; 94US-0350528.

XX

PA (BION-) BIONEERASKA INC.

XX

PI Heriksen DB, Holmquist B, Patridge BE, Stout JS;

PI Wagner FW;

XX

DR WPI; 1996-287185/29.

XX

PT Production of C-terminal alpha-carboxamidated peptide(s) - by

PT cleavage and transpeptidation of recombinant multicopy peptide(s) or

PT fusion constructs

XX

PS Example 16; Page 69; 93pp; English.

XX

CC Amidated recombinant GLP1(7-36)-NH2 (AAR98975) may be prep'd. from

CC a recombinant multicopy fusion peptide by cleavage, transamidation

CC and photochemical rearrangement. A DNA construct is formed by

CC joining 4 copies of the coding sequence for GLP1(7-36)-Met

CC (AAR98976) and a linker peptide including a thrombin cleavage site.

CC Expression in E. coli, followed by thrombin and CNBr digestion yields

CC GLP1(7-36)-Hse (AAR98977), which is subjected to transamidation and

CC UV irradiation to yield GLP1(7-36)-NH2. The amidated peptide may also

CC be produced via GLP1(7-35)-Met (AAR98978) using a transpeptidation

CC reaction.

XX

SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 17; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

DB 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

RESULT 8

AAW16383

ID AAW16383 standard; Peptide; 30 AA.

XX

AC AAW16383;

XX

DT 25-MAR-2003 (updated)

DT 01-OCT-1997 (first entry)

XX

DE Glucagon-like peptide-1(7-36).

XX

KW Glucagon-like peptide-1(7-36); GLP-1 (7-36); insulin secretagogue;

KW insulinotropic hormone; type II diabetes mellitus; therapy.

XX

OS Rattus sp.

XX

PN US5614492-A.

XX

PD 25-MAR-1997.

XX

PF 23-NOV-1993; 93US-0156800.

XX

PR 05-SEP-1991; 91US-0756215.

PR 05-MAY-1986; 86US-0859928.

PR 26-JAN-1988; 88US-0148517.

PR 01-JUN-1990; 90US-0532111.

PR 23-NOV-1993; 93FS-0156800.

XX

PA (GEO) GEN HOSPITAL CORP.

XX

PI Habener JF;

XX

DR WPI; 1997-201513/18.

XX

XX Glucagon-like peptide-1 fragment comprising amino acids 7-36 -

PT useful for enhancing insulin production in pancreatic islet cells,

PT especially for treating type II diabetes mellitus

XX

PS Claim 1; Column 34; 37pp; English.

XX

CC Glucagon-like peptide-1 (7-36) (AAW16383) comprises amino acid

CC residues 7-36 of rat glucagon-like peptide-1 (GLP-1) (see also

CC AAW16384). It is naturally produced from GLP-1 in the intestine

CC and to a lesser extent in the pancreas. GLP-1(7-36) has

CC insulinotropic activity, being able to stimulate the synthesis

CC and secretion of insulin from the pancreas. It can be produced

CC by chemical synthesis or by proteolytic digestion of GLP-1 for use

CC as an insulin secretagogue or for the treatment of type II diabetes

CC mellitus.

CC (Updated on 25-MAR-2003 to correct PF field.)

XX

SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 18; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

DB 1 HAEGETTSDVSYLGGQAQKEFTAWLVKGR 30

|||||

ues and derivatives - to
obesity

ing body weight which
comprising: (i) glucagon-
ogue; (ii) a GLP-1 derivative;
) an agonist of the GLP-1
and which stimulates synthesis
t stimulates release of
aterial described in (i)-(vii).
esity. The present sequence,
d GLP-1 compound which can be

DB 19; Length 30;
..3e-15; Indels 0; Gaps 0
0
0

lipophilic; tetradecanoyl;

KW human; incretin hormone.
XX Synthetic.
OS Homo sapiens.
XX
XX
XX Key Location/Qualifiers
FT Modified-site 30
FT /note= "amidated"
XX
XX WO9808873-A1.
XX
XX 05-MAR-1998.
XX
XX 26-AUG-1997; 97WO-US15042.
XX
XX 21-AUG-1997; 97US-0024982.
XX 30-AUG-1996; 96US-0024982.
XX
XX (ELIL) LILLY & CO ELI.
XX
XX Efendic S;
XX
XX WPI; 1998-239722/21.
XX
XX Use of glucagon-like peptide-1 and analogues and their derivatives
PT - to attenuate post-surgical catabolic changes, insulin resistance
PT and hormonal responses to stress
XX
XX Claim 1; Page 13; 42pp; English.
XX
XX The present sequence represents a glucagon-like peptide-1 (GLP-1)
CC analogue, which is used in the methods of the invention. The methods
CC are: (1) for attenuating post-surgical catabolic changes and insulin
CC resistance, comprising administering glucagon-like peptide-1 (GLP-1), a
CC GLP-1 analogue, a GLP-1 derivative, or a salt of this compound; (2) for
CC attenuating post-surgical catabolic changes and hormonal responses to
CC stress, comprising administering a compound which exerts insulinotropic
CC activity by interacting with the same receptor (or receptors) with which
CC GLP-1, GLP-1 analogues and GLP-1 derivatives interact in exerting their
CC insulinotropic activity, and (3) for attenuating post-surgical catabolic
CC changes and hormonal responses to stress, comprising administering a
CC compound which enhances insulin sensitivity by interacting with the same
CC receptor (or receptors) with which GLP-1, GLP-1 analogues and GLP-1
CC derivatives interact to enhance insulin sensitivity. The processes are
CC useful for improving recovery after surgery by preventing the catabolic
CC reaction and insulin resistance caused by surgical trauma and
CC exacerbated by pre-operative fasting. GLP-1's short half-life, and hence
CC the need for continuous administration, are not disadvantages, as the
CC patient is usually hospitalised before surgery, and fluids are
CC continuously administered parenterally, before, during and after surgery.
XX
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 19; Length 30;
Best Local Similarity 100.0%; Pred. NO. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETSDVSSYLEGQAQKEFTANLVKGR 30
|||
DB 1 HAEGETSDVSSYLEGQAQKEFTANLVKGR 30
|||
RESULT 12
AAY42935
ID AAY42935 standard; peptide; 30 AA.
XX
XX AC AAY42935;
XX
XX 20-DEC-1999 (first entry)
XX
XX Glucagon-like peptide GLP-1 (7-36).
XX
XX Glucagon-like peptide; GLP-1; antidiabetic; anti-obesity;

KW insulintropic; appetite suppressant.
XX
XX OS Homo sapiens.
XX
XX WO9943707-A1.
XX
XX PD 02-SEP-1999.
XX
XX 25-FEB-1999; 99WO-DK00085.
XX
XX 27-FEB-1998; 98DK-0000263.
XX 27-FEB-1998; 98DK-0000268.
XX 08-APR-1998; 98DK-0000508.
XX
XX (NOVO) NOVO-NORDISK AS.
XX
XX Knudsen LB, Huusfeldt PO, Nielsen PF, Madsen K;
XX WPI; 1999-540561/45.
XX
XX New N-modified peptide derivatives, useful for treating diabetes,
PT insulin resistance and obesity
XX
XX Disclosure; Page 1; 62pp; English.
XX
XX New glucagon-like peptide-1 (GLP-1) derivatives are disclosed which
CC comprise residues 7-45 of GLP-1 or a fragment thereof, preferably
CC residues 7-36, 7-37 or 7-38 or their analogues, in which (a) a
CC lipophilic substituent is attached to at least one amino acid and (b)
CC the N-terminal is substituted with a group containing an optionally
CC substituted 5- or 6-membered N-heterocycle, e.g. imidazolyl. The
CC compounds stimulate secretion of insulin, suppress secretion of
CC glucagon, suppress gastric motility and/or restore glucose compliance
CC to beta-cells. They are used to treat insulin-dependent or non-insulin-
CC dependent diabetes mellitus, insulin resistance and obesity. They have
CC a longer-lasting action than GLP-1 derivatives that lack the lipophilic
CC substituent. Some of them also exist as partially structured micelle
CC like aggregates, so have improved solubility and stability. The present
CC sequence is a specifically preferred example of a GLP-1 analogue on
CC which the derivatives are based.
XX
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 20; Length 30;
Best Local Similarity 100.0%; Pred. NO. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETSDVSSYLEGQAQKEFTANLVKGR 30
|||
DB 1 HAEGETSDVSSYLEGQAQKEFTANLVKGR 30
|||
RESULT 13
AAY27374
ID AAY27374 standard; peptide; 30 AA.
XX
XX AC AAY27374;
XX
XX 26-NOV-1999 (first entry)
XX
XX Glucagon-like peptide 1 (GLP-1) fragment (residues 7-36).
XX
XX Glucagon; glucagon-like peptide 1; GLP-1; detergent; glycomolytic;
XX gluconeogenesis; insulin secretion; diabetes mellitus; obesity;
XX spasmolytic; hypoglycemia.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
FT Modified-site 30
FT /note= "C-terminal amide"
XX
XX WO9947160-A1.

XX PD 23-SEP-1999.
XX PF 08-MAR-1999; 99WO-DK00115.
XX PR 13-MAR-1998; 98EP-0610006.
XX PR 18-MAR-1998; 98US-0078422.
XX PA (NOVO) NOVO-NORDISK AS.
XX PI Kaarsholm NC;
XX DR WPI; 1999-551858/47.
XX CC Aqueous solution of glucagon or glucagon-like peptide-1 stabilized with charged detergent, for treating diabetes or obesity -
XX PS Examples; Page 5; 27pp; English.
XX CC The invention provides an aqueous solution that comprises: (i) at least one glucagon or glucagon-like peptide-1 (GLP-1), or their analogs or derivatives (I) and (ii) at least one detergent, other than dodecyl phosphocholine. The peptide (I) has at least two positive or negative charges or at least one charge of each sign. Glucagon is involved in glycogenolytic and gluconeogenesis processes (it also has a spasmodic effect on smooth muscle) while GLP-1 promotes secretion of insulin and suppresses that of glucagon. The polar head of detergent interacts with the charged side chains in (I) while the hydrophobic tail interacts with the hydrophobic patch in (I). The solution is used to treat (non-)insulin-dependent diabetes mellitus and obesity. Glucagon is also used in radiology as a spasmodic and for treating hypoglycemia. The detergent stabilizes the solutions, which are available for immediate use and can be stored for a long time at 4-25plusOC. The solutions may have pH between 4 and 9, allowing selection of conditions that suppress chemical degradation. The detergents are made from natural materials so have better biological compatibility than known detergents. The present sequence represents a GLP-1 peptide fragment.
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 20; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 HAEGETFTSDVSSYLEGQAAKEFIWLKGR 30
Db 1 HAEGETFTSDVSSYLEGQAAKEFIWLKGR 30
RESULT 14
RAY39773
ID AAY39773 standard; peptide; 30 AA.
XX AC AAY39773;
XX DT 26-NOV-1999 (first entry)
XX DE Glucagon like peptide-1 (7-36).
XX KW Glucagon-like peptide-1; GLP-1; appetite suppression; human; diabetes;
XX XW Spontaneous food intake; therapy.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT Misc-difference 29 /note= "amidated"
XX PN WO9947161-A1.
XX PD 23-SEP-1999.
XX PR 16-MAR-1999; 99WO-US05571.

XX PR 19-MAR-1998; 98US-0078544.
XX PA (BION-) BIONEBRASKA INC.
XX PI Goke B, Beglinger C, Coolidge TR;
XX DR WPI; 1999-561859/47.
XX PT New composition for controlling food intake especially in diabetes sufferers -
XX PS Claim 5; Page 22; 35pp; English.
XX CC This sequence represents a glucagon-like peptide-1 sequence used in the composition of the invention. The composition is for appetite suppression, and comprises a compound binding to a GLP-1 receptor and a pharmaceutical carrier. The composition can be administered to control appetite and/or reduce spontaneous food intake in humans, especially in humans with diabetes.
XX SQ Sequence 30 AA;
Query Match 100.0%; Score 155; DB 20; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 HAEGETFTSDVSSYLEGQAAKEFIWLKGR 30
Db 1 HAEGETFTSDVSSYLEGQAAKEFIWLKGR 30
RESULT 15
RAY34198
ID AAY34198 standard; peptide; 30 AA.
XX AC AAY34198;
XX DT 16-NOV-1999 (first entry)
XX DE GLP-1 mutant peptide, GLP-1(7-36).
XX KW GLP-1; Glucagon-like peptide-1; human; type I diabetes; type II diabetes; obesity; therapy; mutein.
XX OS Homo sapiens.
XX OS Synthetic.
XX FH Key Location/Qualifiers
XX FT Misc-difference 30 /note= "optionally amidated"
XX PN WO9943341-A1.
XX PD 02-SEP-1999.
XX PF 25-FEB-1999; 99WO-DK00084.
XX PR 27-FEB-1998; 98DK-0000268.
XX PR 27-FEB-1998; 98DK-0000272.
XX PA (NOVO) NOVO-NORDISK AS.
XX PI Knudsen LB, Huusfeldt PC, Nielsen PF, Kaarsholm NC, Olsen HB;
XX PI Bjorn SE;
XX DR WPI; 1999-540500/45.
XX PT Composition containing stabilized derivatives of glucagon-like peptide-1 with high alpha-helix content, for treating diabetes and obesity
XX PS Claim 30; Page -; 63pp; English.

xx This sequence represents a mutant of the human glucagon-like peptide-1
CC (GLP-1), and has a helix content (determined by circular dichroism at
CC 222 nm in water at 20-24 degrees C) over 25, preferably 25-50, % at
CC peptide concentration about 10 microm. The GLP-1 mutant can be used in a
CC pharmaceutical composition of the invention. The compositions are used to
CC treat diabetes (both type I and particularly type II) and/or obesity.
CC They have better solubility and/or stability (against endogenous
CC diaminopeptidyl peptidase) than parent peptides, with long persistence in
CC the plasma and retention of biological activity. They form partially
CC structured micelle-like aggregates in solution, with the helix content
CC practically independent of concentration.
CC NOTE: This sequence was created from the human GLP-1 sequence using
CC information given in the specification.

xx SQ Sequence 30 AA;

Query Match 100.0%; Score 155; DB 20; Length 30;
Best Local Similarity 100.0%; Pred. NO. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETFDVSSYLSGQAKKEFTANLVKGR 30

Db 1 HAEGETFDVSSYLSGQAKKEFTANLVKGR 30

Search completed: October 15, 2003, 10:53:05
Job time : 60.5082 secs

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OM protein - protein search, using sw model

Ran on: October 15, 2003, 10:51:07 ; Search time 19.6721 Seconds
(without alignments)
64.524 Million cell updates/sec

Title: US-09-719-410-4

Sequence: 1 HAEFTSDVSVLEGGRAKEFIAMLVKGR 30

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents_AA:*

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6: /cgn2.6/ptodata/1/1aa/backfiles1.pap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	155	100.0	30	1	US-08-066-480-6
2	155	100.0	30	1	US-08-098-182-1
3	155	100.0	30	1	US-08-470-220A-1
4	155	100.0	30	2	US-08-927-227-1
5	155	100.0	30	3	US-08-967-374-1
6	155	100.0	30	3	US-09-348-136-1
7	155	100.0	30	3	US-08-961-405A-5
8	155	100.0	30	3	US-08-915-918A-5
9	155	100.0	30	3	US-09-302-596-4
10	155	100.0	30	3	US-08-472-349-3
11	155	100.0	30	3	US-09-333-415-4
12	155	100.0	30	4	US-09-585-181A-4
13	155	100.0	30	4	US-09-209-799D-10
14	155	100.0	30	4	US-09-978-905-1
15	155	100.0	30	4	US-09-505-991-1
16	155	100.0	30	4	US-09-573-809-1
17	155	100.0	30	4	US-09-303-016-4
18	155	100.0	30	4	US-09-212-663-4
19	155	100.0	30	4	US-09-614-847-114
20	155	100.0	30	4	US-09-997-792A-8
21	155	100.0	30	4	US-09-805-507-4
22	155	100.0	30	4	US-09-585-186A-5
23	155	100.0	30	5	PCF-US95-13800-27
24	155	100.0	31	1	US-09-025-951-1
25	155	100.0	31	1	US-08-095-162-3
26	155	100.0	31	1	US-08-295-913A-1
27	155	100.0	31	1	US-08-470-220A-3

28	155	100.0	31	2	US-08-807-263-3	Sequence 3, Appli
29	155	100.0	31	3	US-08-967-374-3	Sequence 3, Appli
30	155	100.0	31	3	US-08-961-405A-1	Sequence 1, Appli
31	155	100.0	31	3	US-08-915-918A-1	Sequence 1, Appli
32	155	100.0	31	3	US-09-302-596-3	Sequence 3, Appli
33	155	100.0	31	3	US-08-472-349-2	Sequence 2, Appli
34	155	100.0	31	4	US-09-623-618B-2	Sequence 2, Appli
35	155	100.0	31	4	US-09-623-618B-17	Sequence 17, Appli
36	155	100.0	31	4	US-09-623-618B-27	Sequence 27, Appli
37	155	100.0	31	4	US-09-623-618B-28	Sequence 28, Appli
38	155	100.0	31	4	US-09-333-415-3	Sequence 3, Appli
39	155	100.0	31	4	US-09-209-799D-1	Sequence 1, Appli
40	155	100.0	31	4	US-09-265-141A-1	Sequence 1, Appli
41	155	100.0	31	4	US-09-505-991-3	Sequence 3, Appli
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43	155	100.0	31	4	US-09-212-663-3	Sequence 3, Appli
44	155	100.0	31	4	US-09-657-332A-2	Sequence 2, Appli
45	155	100.0	31	4	US-09-657-332A-17	Sequence 17, Appli

ALIGNMENTS

RESULT 1
US-08-066-480-6
; Sequence 6, Application US/08066480
; Patent No. 5424286
; GENERAL INFORMATION:
; APPLICANT: Eng, John
; TITLE OF INVENTION: Pharmaceutical Compositions And Use of
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Allegretti & Witcoff, Ltd.
; STREET: 10 S. Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/066,480
; FILING DATE: 24-MAR-1993
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: McDonnell, John J
; REGISTRATION NUMBER: 26,949
; REFERENCE/DOCKET NUMBER: 93,084
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-715-1000
; TELEFAX: 312-715-1234
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 1..30
; OTHER INFORMATION: /label= GLP-1-7-36
; OTHER INFORMATION: /note= GLP-1(7-36) fragment"

US-08-066-480-6
Query Match 100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETTSDVSSYLEGQAAKEFIAMLVKGR 30
DB 1 HAEGETTSDVSSYLEGQAAKEFIAMLVKGR 30

RESULT 2

US-08-095-162-1
; Sequence 1, Application US/08095162
; Patent No. 5512459
; GENERAL INFORMATION:
; APPLICANT: Wagner, Fred W.
; APPLICANT: Stout, Jay
; APPLICANT: Henriksen, Dennis
; APPLICANT: Partridge, Bruce
; APPLICANT: Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; TITLE OF INVENTION: Recombinant Polypeptides
; NUMBER OF SEQUENCES: 26

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 No. 5512459west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/095.162
; FILING DATE: 20-JUL-1993
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, Albin J.
; REGISTRATION NUMBER: 28,659
; REFERENCE/DOCKET NUMBER: 8648.32-US01

; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081

; INFORMATION FOR SEQ ID NO: 1:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 30 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

; IMMEDIATE SOURCE:

; CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)

US-08-095-162-1

Query Match 100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGETTSDVSSYLEGQAAKEFIAMLVKGR 30

RESULT 3

US-08-470-220A-1
; Sequence 1, Application US/08470220A
; Patent No. 5707826
; GENERAL INFORMATION:
; APPLICANT: Wagner, Fred W.
; APPLICANT: Stout, Jay
; APPLICANT: Henriksen, Dennis
; APPLICANT: Partridge, Bruce
; APPLICANT: Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; TITLE OF INVENTION: Recombinant Polypeptides
; NUMBER OF SEQUENCES: 26

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 No. 5707826west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/470.220A
; FILING DATE: 06-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/095.162
; FILING DATE: 20-JUL-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Nelson, Albin J.
; REGISTRATION NUMBER: 28,659
; REFERENCE/DOCKET NUMBER: 8648.32-US01

; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081

; INFORMATION FOR SEQ ID NO: 1:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 30 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: peptide

; IMMEDIATE SOURCE:

; CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)

US-08-470-220A-1

Query Match 100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGETTSDVSSYLEGQAAKEFIAMLVKGR 30

RESULT 4

US-08-927-227-1
; Sequence 1, Application US/08927227A
; Patent No. 5977071
; GENERAL INFORMATION:
; APPLICANT: Galloway, James A.
; APPLICANT: Hoffmann, James A.
; TITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALOGS,
; TITLE OF INVENTION: COMPOSITIONS AND METHODS
; FILE REFERENCE: X-9332B
; CURRENT APPLICATION NUMBER: US/08/927.227A
; CURRENT FILING DATE: 1997-09-10
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO: 1
; LENGTH: 30
; TYPE: PPT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: The arginine residue at position 30 is modified so
; OTHER INFORMATION: as to replace the terminal carboxyl group with an
; OTHER INFORMATION: amine.
US-08-927-227-1

Query Match

100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 HAEGETTSDVSSYLEGQAAKEFIAMLVKGR 30

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Db 1 HAEFTFTSDVSYLGGQAQKEFTIAWLKGR 30

RESULT 5
US-08-967-374-1
; Sequence 1, Application US/08967374
; Patent No. 6037143
; GENERAL INFORMATION:
; APPLICANT: Wagner, Fred W.
; APPLICANT: Stout, Jay
; APPLICANT: Henriksen, Dennis
; APPLICANT: Partridge, Bruce
; APPLICANT: Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; RECOMBINANT POLYPEPTIDES
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 No. 6037143west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/967,374
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/520,485
; FILING DATE: 29-AUG-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Carter, Charles G.
; REGISTRATION NUMBER: 35,093
; REFERENCE/DOCKET NUMBER: 8648.32-USD1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: Peptide
; IMMEDIATE SOURCE:
; CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)
US-08-967-374-1

Query Match 100.0%; Score 155; DB 3; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEFTFTSDVSYLGGQAQKEFTIAWLKGR 30
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Db 1 HAEFTFTSDVSYLGGQAQKEFTIAWLKGR 30

RESULT 6
US-08-348-136-1
; Sequence 1, Application US/09348136
; Patent No. 6133235
; GENERAL INFORMATION:
; APPLICANT: Galloway, James A.
; APPLICANT: Haimann, James A.
; TITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALOGS,
; COMPOSITIONS AND METHODS
; FILE REFERENCE: X-9332B
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; CURRENT APPLICATION NUMBER: US/09/348,136
; CURRENT FILING DATE: 1999-07-06
; PRIOR APPLICATION NUMBER: US 08/927,227
; PRIOR FILING DATE: 1997-09-10
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PPT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: The arginine residue at position 30 is modified so
; OTHER INFORMATION: as to replace the terminal carboxyl group with an
; OTHER INFORMATION: amine.
US-09-348-136-1

Query Match 100.0%; Score 155; DB 3; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEFTFTSDVSYLGGQAQKEFTIAWLKGR 30

RESULT 7
US-08-961-405A-5
; Sequence 5, Application US/08961405A
; Patent No. 6191102
; GENERAL INFORMATION:
; APPLICANT: Dimarchi, Richard D.
; APPLICANT: Efendic, Suad
; TITLE OF INVENTION: USE OF GLP-1 ANALOGS AND DERIVATIVES
; TITLE OF INVENTION: ADMINISTERED PERIPHERALLY IN REGULATION OF OBESITY
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BARNES & THORNBURG
; STREET: 200 W. Madison, Suite 2601
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/961,405A
; FILING DATE: 30-OCT-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/030,213
; FILING DATE: 05-NOV-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Martin, Alice O.
; REGISTRATION NUMBER: 35,601
; REFERENCE/DOCKET NUMBER: 3051/90264
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-357-1313
; TELEFAX: 312-759-5646
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: Peptide
US-08-961-405A-5

Query Match 100.0%; Score 155; DB 3; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 1 HAEFTSDVSSYLEGQAAKEFIAWLKGR 30
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

Query Match
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Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 HAEFTSDVSSYLEGQAAKEFIAWLKGR 30
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

RESULT 8
US-08-915-918A-5
; Sequence 5, Application US/08915918A
; Patent No. 6277819
; GENERAL INFORMATION:
; APPLICANT: Eficidic, Sued
; TITLE OF INVENTION: USE OF GLP-1 OR ANALOGS IN TREATMENT OF
; TITLE OF INVENTION: MYOCARDIAL INFARCTION
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BRINKS, HOFER, GILSON & LIONE
; STREET: NBC Tower - Suite 3600, 455 N. Cityfront
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60611-5599
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION NUMBER: US/08/915,918A
; FILING DATE: 21-AUG-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Martin, Alice O.
; REGISTRATION NUMBER: 35,601
; REFERENCE/DOCKET NUMBER: 8792/28
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-321-4200
; TELEFAX: 312-321-4299
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-915-918A-5

Query Match
Best Local Similarity 100.0%; Score 155; DB 3; Length 30;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

Db 1 HAEFTSDVSSYLEGQAAKEFIAWLKGR 30
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

RESULT 9
US-09-302-596-4
; Sequence 4, Application US/09302596
; Patent No. 6284725
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; TITLE OF INVENTION: Ischemic and Reperfused Tissue
; FILE REFERENCE: P036600S1
; CURRENT APPLICATION NUMBER: US/09/302,596
; PRIOR FILING DATE: 1999-04-30
; PRIOR FILING DATE: 1998-10-08
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 4

QY 1 HAEFTSDVSSYLEGQAAKEFIAWLKGR 30
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

Query Match
Best Local Similarity 100.0%; Score 155; DB 3; Length 30;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 HAEFTSDVSSYLEGQAAKEFIAWLKGR 30
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-302-596-4

RESULT 10
US-08-472-349-3
; Sequence 3, Application US/08472349
; Patent No. 6284727
; GENERAL INFORMATION:
; APPLICANT: Kim, Yesook
; APPLICANT: Lambert, William J.
; APPLICANT: Qi, Hong
; APPLICANT: Gelfand, Robert A.
; APPLICANT: Geochagan, Kieran F.
; APPLICANT: Danley, Dennis E.
; TITLE OF INVENTION: Prolonged Delivery of Peptides
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Pfizer Inc
; STREET: 235 East 42nd Street, 20th Floor
; CITY: New York
; STATE: New York
; COUNTRY: U.S.A.
; ZIP: 10017-5755
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/472,349
; FILING DATE:
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/181,655
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Shevka, Robert F.
; REGISTRATION NUMBER: 31,304
; REFERENCE/DOCKET NUMBER: PC8391
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212)573-1189
; TELEFAX: (212)573-1939
; TELEX: N/A
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
; ORIGINAL SOURCE:
; ORGANISM: N/A
; STRAIN: N/A
; INDIVIDUAL ISOLATE: N/A
; HAPLOTYPE: N/A
; CELL LINE: N/A
; IMMEDIATE SOURCE:
; LIBRARY: N/A
; CLONE: N/A

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/ POSITION IN GENOME:
/ CHROMOSOME/SEGMENT: N/A
/ MAP POSITION: N/A
/ UNITS: N/A
US-08-472-349-3

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Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTFTSDVSSYLEGQAARKEFIAMLVKGR 30
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RESULT 11
US-09-333-415-4
; Sequence 4, Application US/09333415
; Patent No. 6344180
; GENERAL INFORMATION:
; APPLICANT: Holst, Jens J.
; APPLICANT: Vilsbøll, Tina
; TITLE OF INVENTION: GLP-1 as a Diagnostic Test to Determine Beta-Cell
; TITLE OF INVENTION: Function and the Presence of the Condition of IGT and
; TITLE OF INVENTION: Type-II Diabetes
; FILE REFERENCE: P03987050
; CURRENT APPLICATION NUMBER: US/09/333,415
; CURRENT FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-333-415-4

Query Match      100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAARKEFIAMLVKGR 30
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RESULT 12
US-09-585-181A-4
; Sequence 4, Application US/09585181A
; Patent No. 6358924
; GENERAL INFORMATION:
; APPLICANT: Hoffmann, James
; TITLE OF INVENTION: GLP-1 FORMULATIONS
; FILE REFERENCE: X-11368
; CURRENT APPLICATION NUMBER: US/09/585,181A
; CURRENT FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: US 60/067,500
; PRIOR FILING DATE: 1997-12-05
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MOD.RES
; LOCATION: (30)..(30)
; OTHER INFORMATION: AMIDATION
US-09-585-181A-4

Query Match      100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 1 HAEGTFTSDVSSYLEGQAARKEFIAMLVKGR 30
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RESULT 13
US-09-209-799D-10
; Sequence 10, Application US/09209799D
; Patent No. 6380357
; GENERAL INFORMATION:
; APPLICANT: Hermeling, Ronald
; APPLICANT: Hoffmann, James
; APPLICANT: Narasimhan, Chakravarthy
; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE-1 CRYSTALS
; FILE REFERENCE: X-10242
; CURRENT APPLICATION NUMBER: US/09/209,799D
; CURRENT FILING DATE: 1998-12-11
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 10
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic construct
US-09-209-799D-10

Query Match      100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTFTSDVSSYLEGQAARKEFIAMLVKGR 30
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RESULT 14
US-09-975-905-1
; Sequence 1, Application US/09975905
; Patent No. 6388053
; GENERAL INFORMATION:
; APPLICANT: Galloway, John A
; APPLICANT: Hoffmann, James A
; TITLE OF INVENTION: Glucagon-Like Insulinotropic Peptides, Compositions and Methu
; FILE REFERENCE: X-9332E
; CURRENT APPLICATION NUMBER: US/09/975,905
; CURRENT FILING DATE: 2001-10-12
; PRIOR APPLICATION NUMBER: 09/573,809
; PRIOR FILING DATE: 2000-05-18
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MOD.RES
; LOCATION: (30)..(30)
; OTHER INFORMATION: The arginine residue at position 30 is modified so as to rep
; OTHER INFORMATION: the terminal carboxyl group with an amine.
US-09-975-905-1

Query Match      100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 5.6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 15
US-09-505-991-1
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; Sequence 1, Application US/09505991
; Patent No. 6403361
; GENERAL INFORMATION:
; APPLICANT: Wagner, Fred W.
; Stout, Jay
; Henriksen, Dennis
; Partridge, Bruce
; Manning, Shane
; TITLE OF INVENTION: Enzymatic Method for Modification of
; Recombinant Polypeptides
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 No. 6403361west Center
; CITY: Minneapolis
; STATE: MN
; COUNTRY: USA
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/505,991
; FILING DATE: 17-Feb-2000
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/520,485
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Carter, Charles G.
; REGISTRATION NUMBER: 35,093
; REFERENCE/DOCKET NUMBER: 8648.32-US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612-332-5300
; TELEFAX: 612-332-9081
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; IMMEDIATE SOURCE:
; CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-505-991-1

Query Match 100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 5,6e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HREGFTSDVSSYLEGQAAKEFIAWLVKGR 30

Search completed: October 15, 2003, 10:57:32
Job time : 20.6721 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:55:57 ; Search time 42.7869 Seconds
(without alignments)
112.975 Million cell updates/sec

Title: US-09-719-410-4
Perfect score: 155
Sequence: 1 HAEGTFTSDVSYLEGQAQKEFIAMLVKGR 30

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Post-processing: Minimum Match 0%

Maximum Match 100%

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Database : Published Applications AA:*

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- 3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	155	100.0	30	9	US-09-851-738-4
2	155	100.0	30	9	US-09-805-507-4
3	155	100.0	30	10	US-09-859-804-4
4	155	100.0	30	10	US-09-982-978-4
5	155	100.0	30	10	US-09-953-021B-4
6	155	100.0	30	11	US-09-834-229A-5
7	155	100.0	30	11	US-09-997-792-10
8	155	100.0	30	12	US-10-097-230-3
9	155	100.0	30	14	US-10-072-540A-4
10	155	100.0	30	14	US-10-125-255-1
11	155	100.0	30	15	US-10-091-258-4
12	155	100.0	30	15	US-10-035-259-4
13	155	100.0	30	15	US-10-265-345A-2
14	155	100.0	31	9	US-09-754-723-1
15	155	100.0	31	9	US-09-420-785A-3

16	155	100.0	31	9	US-09-876-388-2	Sequence 2, Appli
17	155	100.0	31	9	US-09-876-388-17	Sequence 17, Appl
18	155	100.0	31	9	US-09-876-388-27	Sequence 27, Appl
19	155	100.0	31	9	US-09-876-388-28	Sequence 28, Appl
20	155	100.0	31	9	US-09-851-738-3	Sequence 3, Appli
21	155	100.0	31	9	US-09-805-507-3	Sequence 3, Appli
22	155	100.0	31	10	US-09-859-804-3	Sequence 3, Appli
23	155	100.0	31	10	US-09-982-978-3	Sequence 3, Appli
24	155	100.0	31	10	US-09-953-021B-3	Sequence 3, Appli
25	155	100.0	31	11	US-09-834-229A-1	Sequence 1, Appli
26	155	100.0	31	11	US-09-997-792-1	Sequence 1, Appli
27	155	100.0	31	12	US-10-097-230-2	Sequence 2, Appli
28	155	100.0	31	14	US-10-072-540A-1	Sequence 1, Appli
29	155	100.0	31	15	US-10-093-958-19	Sequence 19, Appl
30	155	100.0	31	15	US-10-169-657-1	Sequence 1, Appli
31	155	100.0	31	15	US-10-169-657-36	Sequence 36, Appl
32	155	100.0	31	15	US-10-091-258-3	Sequence 3, Appli
33	155	100.0	31	15	US-10-055-259-3	Sequence 3, Appli
34	155	100.0	31	15	US-10-287-892-2	Sequence 2, Appli
35	155	100.0	31	15	US-10-287-892-17	Sequence 17, Appl
36	155	100.0	31	15	US-10-287-892-27	Sequence 27, Appl
37	155	100.0	31	15	US-10-287-892-28	Sequence 28, Appl
38	155	100.0	31	15	US-10-288-340-2	Sequence 2, Appli
39	155	100.0	31	15	US-10-288-340-17	Sequence 17, Appl
40	155	100.0	31	15	US-10-288-340-27	Sequence 27, Appl
41	155	100.0	31	15	US-10-288-340-28	Sequence 28, Appl
42	155	100.0	31	15	US-10-265-345A-3	Sequence 3, Appli
43	155	100.0	35	11	US-09-943-084-1	Sequence 1, Appli
44	155	100.0	36	9	US-09-851-738-2	Sequence 2, Appli
45	155	100.0	36	9	US-09-805-507-2	Sequence 2, Appli

ALIGNMENTS

RESULT 1
US-09-851-738-4
; Sequence 4, Application US/09851738
; Patent No. US20020055460A1
; GENERAL INFORMATION:
; APPLICANT: Coolidge, Thomas R.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; TITLE OF INVENTION: Ischemic and Reperfused Tissue
; FILE REFERENCE: P036600S1
; CURRENT APPLICATION NUMBER: US/09/851-738
; CURRENT FILING DATE: 2001-05-09
; PRIOR APPLICATION NUMBER: 09/302,596
; PRIOR FILING DATE: 1999-04-30
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-09-851-738-4

Query Match 100.0%; Score 155; DB 9; Length 30;
Best Local Similarity 100.0%; Pred. NO. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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DB 1 HAEGTFTSDVSYLEGQAQKEFIAMLVKGR 30

RESULT 2
US-09-805-507-4
; Sequence 4, Application US/09805507
; Patent No. US20020098195A1
; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS R.
; APPLICANT: EHLERS, MARIO

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; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/805,507
; CURRENT FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: 09/859,804
; PRIOR FILING DATE: 2001-05-18
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-805-507-4

Query Match      100.0%; Score 155; DB 9; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 3
US-09-859-804-4
; Sequence 4, Application US/09859804
; Patent No. US20020107206A1
; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS R.
; APPLICANT: EHLERS, MARIO
; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/859,804
; CURRENT FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: 60/205,239
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-859-804-4

Query Match      100.0%; Score 155; DB 10; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 4
US-09-982-978-4
; Sequence 4, Application US/09982978
; Patent No. US20020146405A1
; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS R.
; APPLICANT: EHLERS, MARIO
; TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
; FILE REFERENCE: 089187/0395
; CURRENT APPLICATION NUMBER: US/09/982,978
; CURRENT FILING DATE: 2001-10-22
; PRIOR APPLICATION NUMBER: 09/859,804
; PRIOR FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: 60/205,239

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; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: Description of Unknown Organism: Mammalian GLP
; OTHER INFORMATION: peptide
US-09-982-978-4

Query Match      100.0%; Score 155; DB 10; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGTFTSDVSSYLEGQAAKEFTIAWLKGR 30
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RESULT 5
US-09-953-021B-4
; Sequence 4, Application US/09953021B
; Patent No. US2002014713A1
; GENERAL INFORMATION:
; APPLICANT: COOLIDGE, THOMAS L.
; APPLICANT: EHLERS, MARIO R.W.
; TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
; FILE REFERENCE: P036600S6
; CURRENT APPLICATION NUMBER: US/09/953,021B
; CURRENT FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: 09/302,596
; PRIOR FILING DATE: 1999-04-30
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; OTHER INFORMATION:
US-09-953-021B-4

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Db 1 HAEGTFTSDVSSYLEGQAAKEFTIAWLKGR 30
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RESULT 6
US-09-834-229A-5
; Sequence 5, Application US/09834229A
; Publication No. US2003002823A1
; GENERAL INFORMATION:
; APPLICANT: Efendic, Suad
; TITLE OF INVENTION: USE OF GLP-1 OR ANALOGS IN TREATMENT OF MYOCARDIAL INFARCTION
; FILE REFERENCE: X-10822A
; CURRENT APPLICATION NUMBER: US/09/834,229A
; CURRENT FILING DATE: 2001-04-12
; PRIOR APPLICATION NUMBER: US 08/915,918
; PRIOR FILING DATE: 1997-08-21
; PRIOR APPLICATION NUMBER: US 06/034,980
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:

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; OTHER INFORMATION: synthetic construct
US-09-834-229A-5
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Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 7
US-09-997-792-10
; Sequence 10, Application US/0997792
; Publication No. US20030045464A1
; GENERAL INFORMATION:
; APPLICANT: Hermeling, Ronald
; APPLICANT: Hoffmann, James
; APPLICANT: Narasimhan, Chakravarthy
; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE-1 CRYSTALS
; CURRENT APPLICATION NUMBER: US/09/997,792
; CURRENT FILING DATE: 2001-11-30
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 10
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic construct
US-09-997-792-10
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Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 8
US-10-097-230-3
; Sequence 3, Application US/10097230
; Publication No. US20030186436A1
; GENERAL INFORMATION:
; APPLICANT: Perfetti, Riccardo
; APPLICANT: Hui, Hongxiang
; TITLE OF INVENTION: Glucose-Dependent Insulin-Secreting Cells Transfected with a Nucleotide
; FILE OF INVENTION: Sequence Encoding GLP-1
; FILE REFERENCE: 81476-0249704
; CURRENT APPLICATION NUMBER: US/10/097,230
; CURRENT FILING DATE: 2002-03-12
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-097-230-3
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Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 9
US-10-072-540A-4
; Sequence 4, Application US/10072540A
; Publication No. US20020123466A1
; GENERAL INFORMATION:
; APPLICANT: Hoffmann, James
; TITLE OF INVENTION: GLP-1 FORMULATIONS
; FILE REFERENCE: X-11368A
; CURRENT APPLICATION NUMBER: US/10/072,540A
; CURRENT FILING DATE: 2002-02-08
; PRIOR APPLICATION NUMBER: US 60/067,600
; PRIOR FILING DATE: 1997-12-05
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MOD_RES
; LOCATION: (30)..(30)
; OTHER INFORMATION: AMIDATION
US-10-072-540A-4
Query Match      100.0%; Score 155; DB 14; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 10
US-10-125-255-1
; Sequence 1, Application US/10125255
; Publication No. US20020165342A1
; GENERAL INFORMATION:
; APPLICANT: Galloway, John A
; APPLICANT: Hoffmann, James A
; TITLE OF INVENTION: Glucagon-Like Insulinotropic Peptides, Compositions and Methods
; FILE REFERENCE: X-9332E
; CURRENT APPLICATION NUMBER: US/10/125,255
; CURRENT FILING DATE: 2002-04-17
; PRIOR APPLICATION NUMBER: 09/573,809
; PRIOR FILING DATE: 2000-05-18
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MOD_RES
; LOCATION: (30)..(30)
; OTHER INFORMATION: The arginine residue at position 30 is modified so as to replace the terminal carboxyl group with an amine.
US-10-125-255-1
Query Match      100.0%; Score 155; DB 14; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETSDVSSYLEGQAQKEFIAMLVKGR 30
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RESULT 11
US-10-091-258-4
; Sequence 4, Application US/10091258
; Publication No. US20030073626A1
; GENERAL INFORMATION:
; APPLICANT: Hathaway, David R
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; APPLICANT: Coolidge, Thomas R
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING PERIPHERAL VASCULAR DISEASE
; FILE REFERENCE: RGN-2
; CURRENT APPLICATION NUMBER: US/10/091,258
; CURRENT FILING DATE: 2002-03-05
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
US-10-091-258-4

Query Match      100.0%; Score 155; DB 15; Length 30;
Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 12
US-10-055-259-4
; Sequence 4, Application US/10055259
; Publication No. US20030091507A1
; GENERAL INFORMATION:
; APPLICANT: Holst, Jens J.
; APPLICANT: Vilsboll, Tina
; TITLE OF INVENTION: GLP-1 AS A DIAGNOSTIC TEST TO DETERMINE Beta-CELL FUNCTION AND TH
; FILE REFERENCE: P03987US1
; CURRENT APPLICATION NUMBER: US/10/055,259
; CURRENT FILING DATE: 2002-06-21
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-055-259-4

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Best Local Similarity 100.0%; Pred. No. 3.2e-16;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 13
US-10-265-345A-2
; Sequence 2, Application US/10265345A
; Publication No. US20030124669A1
; GENERAL INFORMATION:
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; APPLICANT: Clairmont, Kevin B.
; TITLE OF INVENTION: Peptides Acting as Both GLP-1 receptor Agonists and Glucagon
; FILE REFERENCE: MSB-7288
; TITLE OF INVENTION: Receptor Antagonists and their Pharmacological Methods of Use
; CURRENT APPLICATION NUMBER: US/10/265,345A
; CURRENT FILING DATE: 2003-01-31
; PRIOR APPLICATION NUMBER: US 60/327,730
; PRIOR FILING DATE: 2001-10-05
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-265-345A-2
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RESULT 14
US-09-754-723-1
; Sequence 1, Application US/09754723
; Patent No. US20010002394A1
; GENERAL INFORMATION:
; APPLICANT: EFENDIC, Suad
; APPLICANT: GUTINAK, Mark
; APPLICANT: KIRK, Ole
; TITLE OF INVENTION: Use Of A Peptide
; FILE REFERENCE: 3745.234-US
; CURRENT APPLICATION NUMBER: US/09/754,723
; CURRENT FILING DATE: 2001-06-21
; PRIOR APPLICATION NUMBER: US 08/842,121
; PRIOR FILING DATE: 1997-04-23
; PRIOR APPLICATION NUMBER: US 08/295,913
; PRIOR FILING DATE: 1994-10-13
; PRIOR APPLICATION NUMBER: PCT/DK93/00099
; PRIOR FILING DATE: 1993-03-19
; PRIOR APPLICATION NUMBER: DK 0363/92
; PRIOR FILING DATE: 1992-03-19
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo Sapien
; FEATURES:
; NAME/KEY: VARIANT
; LOCATION: (1)...(31)
; OTHER INFORMATION: Xaa ~ Any Amino Acid
US-09-754-723-1

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Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 15
US-09-420-785A-3
; Sequence 3, Application US/09420785A
; Patent No. US20010010923A1
; GENERAL INFORMATION:
; APPLICANT: MORTENSEN, UFFE
; APPLICANT: OLESEN, KJELD
; APPLICANT: STERNICKE, HENNING
; APPLICANT: SORENSEN, STEEN B.
; APPLICANT: BREDDAM, KLAUS
; TITLE OF INVENTION: MODIFIED CARBOXYPEPTIDASE
; FILE REFERENCE: 089187/0109
; CURRENT APPLICATION NUMBER: US/09/420,785A
; CURRENT FILING DATE: 1999-10-19
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURES:
; NAME/KEY: VARIANT
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; LOCATION: (31)
; OTHER INFORMATION: C-terminal amino acid which serves as a leaving
; OTHER INFORMATION: group, typically, an uncharged amino acid side
; OTHER INFORMATION: Chain, preferably alanine
US-09-420-785A-3

Query Match      100.04; Score 155; DB 9; Length 31;
Best Local Similarity 100.04; Pred. No. 3.3e-16;
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:53:17 ; Search time 285.738 Seconds
(without alignments)
93.534 Million cell updates/sec

Title: US-09-719-410-4

Perfect score: 155

Sequence: 1 HAEQFTSDVSSYLEGQAAKEFIAMLVKGR 30

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Maximum Match 100%

Listing first 45 summaries

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- 32: /cgn2_6/ptodata/1/paa/US116_COMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	155	100.0	30	1 PCT-US02-24141-1 Sequence 1, Appli
3	155	100.0	30	1 PCT-US02-24141-4 Sequence 4, Appli
4	155	100.0	30	1 PCT-US02-25227-25 Sequence 25, Appli
5	155	100.0	30	1 PCT-US02-31633A-2 Sequence 2, Appli
6	155	100.0	30	1 PCT-US03-16643-31 Sequence 31, Appli
7	155	100.0	30	1 PCT-US03-16645-4 Sequence 4, Appli
8	155	100.0	30	1 PCT-US98-25515-4 Sequence 4, Appli
9	155	100.0	30	3 US-07-899-073-3 Sequence 3, Appli
10	155	100.0	30	4 US-08-044-133-3 Sequence 3, Appli
11	155	100.0	30	7 US-08-302-855-1 Sequence 1, Appli
12	155	100.0	30	7 US-08-350-528-53 Sequence 53, Appli
13	155	100.0	30	7 US-08-350-530A-27 Sequence 27, Appli
14	155	100.0	30	7 US-08-356-231-3 Sequence 3, Appli
15	155	100.0	30	9 US-08-520-485-1 Sequence 1, Appli
16	155	100.0	30	13 US-08-908-867-3 Sequence 3, Appli
17	155	100.0	30	13 US-08-908-867A-3 Sequence 3, Appli
18	155	100.0	30	13 US-08-908-857-3 Sequence 3, Appli
19	155	100.0	30	13 US-08-934-171-53 Sequence 53, Appli
20	155	100.0	30	16 US-09-206-601-1 Sequence 1, Appli
21	155	100.0	30	16 US-09-206-601-18 Sequence 18, Appli
22	155	100.0	30	16 US-09-206-601-21 Sequence 21, Appli
23	155	100.0	30	16 US-09-206-833-1 Sequence 1, Appli
24	155	100.0	30	16 US-09-206-833-3 Sequence 3, Appli
25	155	100.0	30	17 US-09-341-590-118 Sequence 118, App
26	155	100.0	30	18 US-09-400-802A-4 Sequence 4, Appli
27	155	100.0	30	19 US-09-554-531A-3 Sequence 3, Appli
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29	155	100.0	30	19 US-09-586-186-5 Sequence 5, Appli
30	155	100.0	30	20 US-09-622-105-3 Sequence 3, Appli
31	155	100.0	30	20 US-09-623-548A-344 Sequence 344, App
32	155	100.0	30	20 US-09-635-679C-4 Sequence 355, App
33	155	100.0	30	20 US-09-646-433-4 Sequence 4, Appli
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35	155	100.0	30	20 US-09-657-275-344 Sequence 344, App
36	155	100.0	30	20 US-09-657-275-355 Sequence 355, App
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41	155	100.0	30	23 US-09-834-259A-5 Sequence 5, Appli
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ALIGNMENTS

RESULT 1
PCT-US02-13088-4
; Sequence 4, Application PC/TUS0213088
; GENERAL INFORMATION:
; APPLICANT: Restoragen, Inc.
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING CONDITIONS ASSOCIATED V
; FILE OF INVENTION: RESISTANCE
; FILE REFERENCE: RGN-3
; CURRENT APPLICATION NUMBER: PCT/US02/13088
; CURRENT FILING DATE: 2002-04-24
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 30
; TYPE: PRT
; ORGANISM: mammalian
PCT-US02-13088-4

Query Match 100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Db 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

RESULT 2

PCT-US02-24141-1

Sequence 1, Application PC/TUS0224141

GENERAL INFORMATION:

APPLICANT: The Government of the United States of America, as represented by the

APPLICANT: Secretary, Department of Health and Human Services

APPLICANT: Greig, Nigel H.

APPLICANT: Egan, Josephine

APPLICANT: Doyle, Maire

APPLICANT: Holloway, Harold

TITLE OF INVENTION: GLP-1, EXENDIN-4, AND PEPTIDE ANALOGS AND USES THEREOF

FILE REFERENCE: 14014.0396P1

CURRENT APPLICATION NUMBER: PCT/US02/24141

CURRENT FILING DATE: 2002-07-30

PRIOR APPLICATION NUMBER: 60/309,076

PRIOR FILING DATE: 2001-07-31

NUMBER OF SEQ ID NOS: 52

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 1

LENGTH: 30

TYPE: PRT

ORGANISM: Human

PCT-US02-24141-1

Query Match 100.0%; Score 155; DB 1; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

Db 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

RESULT 3

PCT-US02-24141-4

Sequence 4, Application PC/TUS0224141

GENERAL INFORMATION:

APPLICANT: The Government of the United States of America, as represented by the

APPLICANT: Secretary, Department of Health and Human Services

APPLICANT: Greig, Nigel H.

APPLICANT: Egan, Josephine

APPLICANT: Doyle, Maire

APPLICANT: Holloway, Harold

TITLE OF INVENTION: GLP-1, EXENDIN-4, AND PEPTIDE ANALOGS AND USES THEREOF

FILE REFERENCE: 14014.0396P1

CURRENT APPLICATION NUMBER: PCT/US02/24141

CURRENT FILING DATE: 2002-07-30

PRIOR APPLICATION NUMBER: 60/309,076

PRIOR FILING DATE: 2001-07-31

NUMBER OF SEQ ID NOS: 52

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 4

LENGTH: 30

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence:/Note =

OTHER INFORMATION: Synthetic Construct

PCT-US02-24141-4

Query Match 100.0%; Score 155; DB 1; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

Db 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

RESULT 4

PCT-US02-25227-25

Sequence 25, Application PC/TUS0225227

GENERAL INFORMATION:

APPLICANT: Genzyme Corporation

APPLICANT: Wadsworth, Samuel C.

APPLICANT: Armentano, Donna

APPLICANT: Gregory, Richard J.

APPLICANT: Parsons, Geoffrey

TITLE OF INVENTION: Methods of Treating Diabetes and Other

TITLE OF INVENTION: Blood Sugar Disorders

FILE REFERENCE: 2478.2019002 PCT

CURRENT APPLICATION NUMBER: PCT/US02/25227

CURRENT FILING DATE: 2002-08-07

PRIOR APPLICATION NUMBER: US 60/310,982

PRIOR FILING DATE: 2001-08-08

NUMBER OF SEQ ID NOS: 54

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 25

LENGTH: 30

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Modified GLP-1 molecule; GLP-1 (7-36)

PCT-US02-25227-25

Query Match 100.0%; Score 155; DB 1; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

Db 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

RESULT 5

PCT-US02-31693A-2

Sequence 2, Application PC/TUS0231693A

GENERAL INFORMATION:

APPLICANT: Bayer Corporation

APPLICANT: Pan, Clark

APPLICANT: Whelan, James

APPLICANT: Clairmont, Kevin B.

TITLE OF INVENTION: Peptides Acting as Both GLP-1 Receptor Agonists and Glucagon

TITLE OF INVENTION: Receptor Antagonists and Their Pharmacological Methods of Use

FILE REFERENCE: MSB-7288-PCT

CURRENT APPLICATION NUMBER: PCT/US02/31693A

CURRENT FILING DATE: 2002-12-19

PRIOR APPLICATION NUMBER: US 60/327,730

PRIOR FILING DATE: 2001-10-05

NUMBER OF SEQ ID NOS: 34

SOFTWARE: PatentIn version 3.2

SEQ ID NO 2

LENGTH: 30

TYPE: PRT

ORGANISM: Homo sapiens

PCT-US02-31693A-2

Query Match 100.0%; Score 155; DB 1; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.3e-15;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

Db 1 HAEGTFTSDVSSYLEGQAQAEFTAWLVKGR 30

RESULT 6

PCT-US03-16643-31

Sequence 31, Application PC/TUS0316643

GENERAL INFORMATION:

APPLICANT: Wagner, F.

APPLICANT: Peng, L.

APPLICANT: Xia, U.

```

> SEQUENCE 47, APPLICATION PC/US98253513
>
> GENERAL INFORMATION:
>
> APPLICANT: Hoffmann, James A.
>
> TITLE OF INVENTION: GJP-1 FORMULATIONS
>
> FILE REFERENCE: X-11368
>
> CURRENT APPLICATION NUMBER: PCT/US98/25515
>
> CURRENT FILING DATE: 1998-12-02
>
> EARLIER APPLICATION NUMBER: US60/067,600
>
> EARLIER FILING DATE: 1997-12-05
>
> NUMBER OF SEQ ID NOS: 5
>
> SOFTWARE: PatentIn Ver. 2.0
>
> SEQ ID NO 4
>

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> SEQUENCE 47, APPLICATION PC/US98253513
>
> GENERAL INFORMATION:
>
> APPLICANT: Hoffmann, James A.
>
> TITLE OF INVENTION: GJP-1 FORMULATIONS
>
> FILE REFERENCE: X-11368
>
> CURRENT APPLICATION NUMBER: PCT/US98/25515
>
> CURRENT FILING DATE: 1998-12-02
>
> EARLIER APPLICATION NUMBER: US60/067,600
>
> EARLIER FILING DATE: 1997-12-05
>
> NUMBER OF SEQ ID NOS: 5
>
> SOFTWARE: PatentIn Ver. 2.0
>
> SEQ ID NO 4
>

```

APPLICANT: Qi, Hong
APPLICANT: Gelfand, Robert A.
APPLICANT: Geobegian, Kieran E.
APPLICANT: Davies, Dennis E.
TITLE OF INVENTION: Prolonged Delivery of Peptides
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pfizer Inc
STREET: 235 East 42nd Street, 20th Floor
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10017-5755
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/044,133
FILING DATE: 07-APR-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sheyka, Robert F.
REGISTRATION NUMBER: 31,304
REFERENCE/DOCKET NUMBER: PC8391
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 30 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: N/A
STRAIN: N/A
INDIVIDUAL ISOLATE: N/A
HAPLOTYPE: N/A
CELL LINE: N/A
IMMEDIATE SOURCE:
LIBRARY: N/A
CLONE: N/A
POSITION IN GENOME:
CHROMOSOME/SEGMENT: N/A
MAP POSITION: N/A
UNITS: N/A
US-08-044-133-3
Query Match 100.0%; Score 155; DB 4; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
Db 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
RESULT 11
US-08-302-855-1
Sequence 1, Application US/08302855
GENERAL INFORMATION:
APPLICANT: Kirk, Ole
APPLICANT: Prigdal, Lone
TITLE OF INVENTION: NOVEL MEDICAMENT
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:

ADDRESSEE: Novo Nordisk of North America, Inc.
STREET: 405 Lexington Avenue, 64th Floor
CITY: New York
STATE: New York
COUNTRY: United States of America
ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/302,855
FILING DATE: 16-SEP-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DK PC7/DK93/00098
FILING DATE: 18-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3746,204-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 30 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-302-855-1
Query Match 100.0%; Score 155; DB 7; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
Db 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
RESULT 12
US-08-350-528-53
Sequence 53, Application US/08350528
GENERAL INFORMATION:
APPLICANT: Stout, Jay
APPLICANT: Partridge, Bruce
APPLICANT: Henriksen, Dennis
APPLICANT: Holmquist, Barton
APPLICANT: Wagner, Fred
TITLE OF INVENTION: PRODUCTION OF C-TERMINAL AMIDATED PEPTIDES FROM RECOMB
NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant & Gould
STREET: 3100 Norwest
CITY: Mpls
STATE: MN
COUNTRY: USA
ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/350,528
FILING DATE: 07-DEC-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:

```

; ATTORNEY/AGENT INFORMATION:
; NAME: Carter, Charles G
; REGISTRATION NUMBER: 35,093
; REFERENCE/DOCKET NUMBER: 8648.43US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 332-5300
; TELEFAX:
; TELEX:
; INFORMATION FOR SEQ ID NO: 53:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: internal
; ORIGINAL SOURCE:
; US-08-350-528-53

Query Match 100.0%; Score 155; DB 7; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30
DB 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30

RESULT 13
US-08-350-530A-27
; Sequence 27, Application US/08350530A
; GENERAL INFORMATION:
; APPLICANT: Patriège, Bruce
; APPLICANT: Stout, Jay Dennis
; APPLICANT: Henriksen, Shane
; APPLICANT: Manning, Rebecca
; APPLICANT: De La Motte, Rebecca
; APPLICANT: Holmquist, Barton
; APPLICANT: Wagner, Fred
; TITLE OF INVENTION: PRODUCTION OF PEPTIDE USING RECOMBINANT
; TITLE OF INVENTION: FUSION PROTEIN CONSTRUCTS
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Merchant & Gould
; STREET: 3100 Northwest Center, 90 S. 7th Street
; CITY: Minneapolis
; STATE: MN
; COUNTRY: U.S.A.
; ZIP: 55402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/350,530A
; FILING DATE: 07-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Carter, Charles G
; REGISTRATION NUMBER: 35,093
; REFERENCE/DOCKET NUMBER: 8648.45US01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 612/332-5300
; TELEFAX: 612/332-9081
; TELEX:
; INFORMATION FOR SEQ ID NO: 27:
; SEQUENCE CHARACTERISTICS:
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; LENGTH: 30 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: internal
; ORIGINAL SOURCE:
; US-08-350-530A-27

Query Match 100.0%; Score 155; DB 7; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30
DB 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30

RESULT 14
US-08-356-231-3
; Sequence 3, Application US/08356231
; GENERAL INFORMATION:
; APPLICANT: Andrews, Glenn C.
; APPLICANT: Daumy, Gaston O.
; APPLICANT: Francoeur, Michael L.
; APPLICANT: Larson, Eric R.
; APPLICANT: Pfizer Inc, (Non-US)
; TITLE OF INVENTION: GLUCAGON-LIKE PEPTIDE AND INSULINOTROPIN
; TITLE OF INVENTION: DERIVATIVES
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Gregg C. Benson, Pfizer Inc
; STREET: Eastern Point Road
; CITY: Groton
; STATE: CT
; COUNTRY: USA
; ZIP: 06340
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/356,231
; FILING DATE:
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/899,073
; FILING DATE: 15-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Benson, Gregg C.
; REGISTRATION NUMBER: 30,997
; REFERENCE/DOCKET NUMBER: PC8156AGCB
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (203) 441-4901
; TELEFAX: (203) 441-5221
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-356-231-3

Query Match 100.0%; Score 155; DB 7; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30
DB 1 HAEGTFSDVSSYLEGQAQKEFIANLVKGR 30
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RESULT 15
US-08-520-485-1
: Sequence 1. Application US/08520485
: GENERAL INFORMATION:
: APPLICANT: Wagner, Fred W.
: APPLICANT: Stout, Jay
: APPLICANT: Henriksen, Dennis
: APPLICANT: Partridge, Bruce
: APPLICANT: Manning, Shane
: TITLE OF INVENTION: Enzymatic Method for Modification of
: NUMBER OF SEQUENCES: 26
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: Merchant & Gould
: STREET: 3100 Norwest Center
: CITY: Minneapolis
: STATE: MN
: COUNTRY: USA
: ZIP: 55402
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: PatentIn Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/520,485
: FILING DATE: 29-AUG-1995
: CLASSIFICATION: 435
: ATTORNEY/AGENT INFORMATION:
: NAME: Carter, Charles G.
: REGISTRATION NUMBER: 35,093
: REFERENCE/DOCKET NUMBER: 8648.32-USD1
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 612-332-5300
: TELEFAX: 612-332-9081
: INFORMATION FOR SEQ ID NO: 1:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 30 amino acids
: TYPE: amino acid
: TOPOLOGY: linear
: MOLECULE TYPE: peptide
: IMMEDIATE SOURCE:
: CLONE: GLP1 7-36-NH2 (Glucagon-like Peptide)
US-08-520-485-1

Query Match 100.0%; Score 155; DB 9; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETFSDVSSYLEGQAQAEFIAMLVKGR 30
DB 1 HAEGETFSDVSSYLEGQAQAEFIAMLVKGR 30

Search completed: October 15, 2003, 11:07:21
Job time : 286.738 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: October 15, 2003, 10:53:47 ; Search time 14.7541 Seconds
(without alignments)
62.284 Million cell updates/sec

Title: US-09-719-410-4

Sequence: 1 HAEGFTSDVSSYLEGQAKEFIANLVKGR 30

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 148013 seqs, 30631251 residues

Total number of hits satisfying chosen parameters: 148013

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Pending_Patents_AA_New.*

- 1: /cgn2.6/ptodata/1/paa/PCT_NEW_COMB.pep.*
- 2: /cgn2.6/ptodata/1/paa/US06_NEW_COMB.pep.*
- 3: /cgn2.6/ptodata/1/paa/US07_NEW_COMB.pep.*
- 4: /cgn2.6/ptodata/1/paa/US08_NEW_COMB.pep.*
- 5: /cgn2.6/ptodata/1/paa/US09_NEW_COMB.pep.*
- 6: /cgn2.6/ptodata/1/paa/US10_NEW_COMB.pep.*
- 7: /cgn2.6/ptodata/1/paa/US60_NEW_COMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	155	100.0	30	1 PCT-US03-26778-14	Sequence 14, Appl
2	155	100.0	30	1 PCT-US03-26818-48	Sequence 48, Appl
3	155	100.0	30	1 PCT-US03-28093-1	Sequence 1, Appl
4	155	100.0	30	5 US-09-341-590A-118	Sequence 118, App
5	155	100.0	30	6 US-10-291-226-114	Sequence 114, App
6	155	100.0	30	6 US-10-656-405-1	Sequence 1, Appl
7	155	100.0	30	6 US-10-671-340-1	Sequence 1, Appl
8	155	100.0	31	1 PCT-US03-15395B-16	Sequence 16, Appl
9	155	100.0	31	1 PCT-US03-26779-34	Sequence 34, Appl
10	155	100.0	31	1 PCT-US03-26778-6	Sequence 6, Appl
11	155	100.0	31	1 PCT-US03-26818-6	Sequence 6, Appl
12	155	100.0	31	1 PCT-US03-26818-64	Sequence 64, Appl
13	155	100.0	31	1 PCT-US03-28093-2	Sequence 2, Appl
14	155	100.0	31	6 US-10-291-226-124	Sequence 124, App
15	155	100.0	31	6 US-10-656-405-2	Sequence 2, Appl
16	155	100.0	31	7 US-60-485-404-34	Sequence 34, Appl
17	155	100.0	32	1 PCT-US03-28093-27	Sequence 27, Appl
18	155	100.0	32	1 PCT-US03-28093-30	Sequence 30, Appl
19	155	100.0	32	6 US-10-656-405-27	Sequence 27, Appl
20	155	100.0	32	6 US-10-656-405-30	Sequence 30, Appl
21	155	100.0	36	5 US-09-341-590A-92	Sequence 92, Appl
22	152	98.1	36	6 US-10-291-226-115	Sequence 115, App
23	151	97.4	30	6 US-10-291-226-87	Sequence 87, Appl
24	151	97.4	30	6 US-10-291-226-112	Sequence 112, Appl
25	151	97.4	30	6 US-10-291-226-113	Sequence 113, App
26	151	97.4	31	6 US-10-291-226-111	Sequence 111, App

Sequence 123, App
Sequence 28, Appl
Sequence 147, Appl
Sequence 28, Appl
Sequence 88, Appl
Sequence 90, Appl
Sequence 103, App
Sequence 116, App
Sequence 119, App
Sequence 117, App
Sequence 122, App
Sequence 133, App
Sequence 89, Appl
Sequence 120, App
Sequence 121, App
Sequence 118, App
Sequence 8, Appl
Sequence 7, Appl

ALIGNMENTS

RESULT 1
PCT-US03-26778-14
; Sequence 14, Application PC/TUS0326778
; GENERAL INFORMATION:
; APPLICANT: PRIOR, Christopher P.
; APPLICANT: SADEGHI, Homayoun
; APPLICANT: TURNER, Andrew J.
; TITLE OF INVENTION: ORAL DELIVERY OF MODIFIED TRANSFERRIN FUSION PROTEINS
; FILE REFERENCE: 54710-5005-WO
; CURRENT APPLICATION NUMBER: PCT/US03/26778
; CURRENT FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: US 60/406,977
; PRIOR FILING DATE: 2002-08-30
; PRIOR APPLICATION NUMBER: US 10/378,094
; PRIOR FILING DATE: 2003-03-04
; PRIOR APPLICATION NUMBER: US 60/460,829
; PRIOR FILING DATE: 2003-04-08
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 14
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: glucagon-like peptide-1
PCT-US03-26778-14

Query Match 100.0% Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAKEFIANLVKGR 30
|||
Db 1 HAEGFTSDVSSYLEGQAKEFIANLVKGR 30

RESULT 2
PCT-US03-26818-48
; Sequence 48, Application PC/TUS0326818
; GENERAL INFORMATION:
; APPLICANT: PRIOR, Christopher P.
; APPLICANT: LAI, Char-Huei
; APPLICANT: SADEGHI, Homayoun
; APPLICANT: TURNER, Andrew J.
; TITLE OF INVENTION: MODIFIED TRANSFERRIN FUSION PROTEINS
; FILE REFERENCE: 54710-5001-01-WO
; CURRENT APPLICATION NUMBER: PCT/US03/26818
; CURRENT FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: US 60/406,977

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; PRIOR FILING DATE: 2003-08-30
; PRIOR APPLICATION NUMBER: US 10/378,094
; PRIOR FILING DATE: 2003-03-04
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 48
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: glucagon-like peptide-1
PCT-US03-26818-48

Query Match      100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 3
PCT-US03-28093-1
; Sequence 1, Application PCT/US0328093
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: 55502(45487)
; CURRENT APPLICATION NUMBER: PCT/US03/28093
; PRIOR FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
PCT-US03-28093-1

Query Match      100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 4
US-09-341-590A-118
; Sequence 118, Application US/09341590A
; GENERAL INFORMATION:
; APPLICANT: LARSEN, BJARNE DUE
; TITLE OF INVENTION: PHARMACOLOGICALLY ACTIVE PEPTIDE CONJUGATES HAVING A
; FILE REFERENCE: 55502(45487)
; CURRENT APPLICATION NUMBER: US/09/341,590A
; PRIOR FILING DATE: 1999-07-12
; PRIOR APPLICATION NUMBER: DK 0317/98
; NUMBER OF SEQ ID NOS: 122
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 118
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens

Query Match      100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 5
US-09-341-590A-118
; Sequence 118, Application US/09341590A
; GENERAL INFORMATION:
; APPLICANT: LARSEN, BJARNE DUE
; TITLE OF INVENTION: PHARMACOLOGICALLY ACTIVE PEPTIDE CONJUGATES HAVING A
; FILE REFERENCE: 55502(45487)
; CURRENT APPLICATION NUMBER: US/09/341,590A
; PRIOR FILING DATE: 1999-07-12
; PRIOR APPLICATION NUMBER: DK 0317/98
; NUMBER OF SEQ ID NOS: 122
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 118
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens

Query Match      100.0%; Score 155; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 6
US-10-656-405-1
; Sequence 1, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; PRIOR FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-1

Query Match      100.0%; Score 155; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
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Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 7
US-10-656-405-1
; Sequence 1, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; PRIOR FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-1

Query Match      100.0%; Score 155; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
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Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
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; FEATURE:
; OTHER INFORMATION: GLP-1-(7-36)
US-09-341-590A-118

Query Match      100.0%; Score 155; DB 5; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 5
US-10-291-226-114
; Sequence 114, Application US/10291226
; GENERAL INFORMATION:
; APPLICANT: Larsen, Bjarne Due
; APPLICANT: Mikkelsen, Jens Mollgaard
; APPLICANT: Neve, Soren
; TITLE OF INVENTION: NOVEL PEPTIDE AGONISTS OF GLP-1 ACTIVITY
; FILE REFERENCE: 55511(45487)
; CURRENT APPLICATION NUMBER: US/10/291,226
; CURRENT FILING DATE: 2002-11-08
; PRIOR APPLICATION NUMBER: US/09/614,847
; PRIOR FILING DATE: 2000-07-12
; PRIOR APPLICATION NUMBER: US 60/443,591
; PRIOR FILING DATE: 1999-07-13
; NUMBER OF SEQ ID NOS: 153
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 114
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: GLP-1(7-36)
US-10-291-226-114

Query Match      100.0%; Score 155; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 6
US-10-656-405-1
; Sequence 1, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; PRIOR FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-1

Query Match      100.0%; Score 155; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
      |||
Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30

RESULT 7
US-10-656-405-1
; Sequence 1, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; PRIOR FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 30
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-1

Query Match      100.0%; Score 155; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
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Db      1 HAEGFTSDVSSYLEGQAAKEFTAMLVKGR 30
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Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30
|||||

Db 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 7

US-10-671-340-1

; Sequence 1, Application US/10671340

; GENERAL INFORMATION:

; APPLICANT: GRAVEL, DENIS

; APPLICANT: PERI, KRISHNA

; APPLICANT: ABRIBAT, THIERRY

; APPLICANT: BABI, ABDELKRIM

; TITLE OF INVENTION: MODIFIED GLP-1 PEPTIDES WITH INCREASED BIOLOGICAL

; TITLE OF INVENTION: POTENCY

; FILE REFERENCE: G00D:028US

; CURRENT APPLICATION NUMBER: US/10/671,340

; PRIOR FILING DATE: 2003-09-25

; PRIOR APPLICATION NUMBER: 60/413,171

; PRIOR FILING DATE: 2002-09-25

; NUMBER OF SEQ ID NOS: 1

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 1

; LENGTH: 30

; TYPE: PRT

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: Synthetic

US-10-671-340-1

Query Match 100.0%; Score 155; DB 6; Length 30;

Best Local Similarity 100.0%; Pred. No. 1.5e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30
|||||

Db 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 8

PCT-US03-15395B-16

; Sequence 16, Application PC/TUS0315395B

; GENERAL INFORMATION:

; APPLICANT: Eli Lilly and Company

; TITLE OF INVENTION: MODIFIED GLUCAGON-LIKE PEPTIDE-1 ANALOGS

; FILE REFERENCE: X-15642

; CURRENT APPLICATION NUMBER: PCT/US03/15395B

; CURRENT FILING DATE: 2003-06-02

; NUMBER OF SEQ ID NOS: 24

; SOFTWARE: PatentIn version 3.2

; SEQ ID NO 16

; LENGTH: 31

; TYPE: PRT

; ORGANISM: Artificial

; FEATURE:

; OTHER INFORMATION: Synthetic construct

PCT-US03-15395B-16

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30
|||||

Db 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 9

PCT-US03-26779-34

; Sequence 34, Application PC/TUS0326779

; GENERAL INFORMATION:

; APPLICANT: Prior, Christopher P.

; APPLICANT: Turner, Andrew J.

; APPLICANT: Sadeghi, Homayoun

; TITLE OF INVENTION: Transferrin Fusion Protein Libraries

; FILE REFERENCE: 054710-5007-WO

; CURRENT APPLICATION NUMBER: PCT/US03/26779

; CURRENT FILING DATE: 2003-08-26

; PRIOR APPLICATION NUMBER: US 60/406,977

; PRIOR FILING DATE: 2002-08-30

; PRIOR APPLICATION NUMBER: US 10/384,060

; PRIOR FILING DATE: 2003-03-10

; PRIOR APPLICATION NUMBER: US 60/485,404

; PRIOR FILING DATE: 2003-07-09

; NUMBER OF SEQ ID NOS: 75

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 34

; LENGTH: 31

; TYPE: PRT

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: MISC_FEATURE

; LOCATION: (1)..(31)

; OTHER INFORMATION: Xaa = Gly or -NH2, amino acids 7-36/37 of GLP-1

PCT-US03-26779-34

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30
|||||

Db 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 10

PCT-US03-26778-6

; Sequence 6, Application PC/TUS0326778

; GENERAL INFORMATION:

; APPLICANT: Prior, Christopher P.

; APPLICANT: Sadeghi, Homayoun

; APPLICANT: Turner, Andrew J.

; TITLE OF INVENTION: ORAL DELIVERY OF MODIFIED TRANSFERRIN FUSION PROTEINS

; FILE REFERENCE: 54710-5006-WO

; CURRENT APPLICATION NUMBER: PCT/US03/26778

; CURRENT FILING DATE: 2003-08-28

; PRIOR APPLICATION NUMBER: US 60/406,977

; PRIOR FILING DATE: 2002-08-30

; PRIOR APPLICATION NUMBER: US 10/378,094

; PRIOR FILING DATE: 2003-03-04

; PRIOR APPLICATION NUMBER: US 60/460,829

; PRIOR FILING DATE: 2003-04-08

; NUMBER OF SEQ ID NOS: 54

; SOFTWARE: PatentIn version 3.2

; SEQ ID NO 6

; LENGTH: 31

; TYPE: PRT

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: MISC_FEATURE

; OTHER INFORMATION: Glucagon-Like Peptide

; FEATURE:

; NAME/KEY: misc.feature

; LOCATION: (31)..(31)

; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

PCT-US03-26778-6

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAQKEFIAMLVKGR 30
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Db 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 11

PCT-US03-26818-6

Sequence 64, Application PC/TUS0326818

GENERAL INFORMATION:

APPLICANT: PRIOR, Christopher P.

APPLICANT: LAI, Char-Ruei

APPLICANT: SADEGHI, Homayoun J.

APPLICANT: TURNER, Andrew J.

TITLE OF INVENTION: MODIFIED TRANSFERRIN FUSION PROTEINS

FILE REFERENCE: 54710-5001-01-WO

CURRENT APPLICATION NUMBER: PCT/US03/26818

CURRENT FILING DATE: 2003-08-28

PRIOR APPLICATION NUMBER: US 60/406,977

PRIOR FILING DATE: 2002-08-30

PRIOR APPLICATION NUMBER: US 10/378,094

PRIOR FILING DATE: 2003-03-04

NUMBER OF SEQ ID NOS: 90

SOFTWARE: PatentIn version 3.2

SEQ ID NO 6

LENGTH: 31

TYPE: PRT

ORGANISM: Homo sapiens

NAME/KEY: MISC_FEATURE

OTHER INFORMATION: Glucagon-Like Peptide

NAME/KEY: misc_feature

LOCATION: (31)..(31)

FEATURE:

NAME/KEY: MISC_FEATURE

LOCATION: (37)..(37)

OTHER INFORMATION: Xaa can be any naturally occurring amino acid

PCT-US03-26818-6

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

Db 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 12

PCT-US03-26818-64

Sequence 64, Application PC/TUS0326818

GENERAL INFORMATION:

APPLICANT: PRIOR, Christopher P.

APPLICANT: LAI, Char-Ruei

APPLICANT: SADEGHI, Homayoun J.

APPLICANT: TURNER, Andrew J.

TITLE OF INVENTION: MODIFIED TRANSFERRIN FUSION PROTEINS

FILE REFERENCE: 54710-5001-01-WO

CURRENT APPLICATION NUMBER: PCT/US03/26818

CURRENT FILING DATE: 2003-08-28

PRIOR APPLICATION NUMBER: US 60/406,977

PRIOR FILING DATE: 2002-08-30

PRIOR APPLICATION NUMBER: US 10/378,094

PRIOR FILING DATE: 2003-03-04

NUMBER OF SEQ ID NOS: 90

SOFTWARE: PatentIn version 3.2

SEQ ID NO 64

LENGTH: 31

TYPE: PRT

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: GLP-1(7-37) amino acid sequence

PCT-US03-26818-64

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

Db 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

Db 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 13

PCT-US03-28093-2

Sequence 2, Application PC/TUS0328093

GENERAL INFORMATION:

APPLICANT: Bayer Pharmaceuticals Corporation

APPLICANT: Pan, Clark

APPLICANT: Whelan, James

TITLE OF INVENTION: Modified GLP-1 Receptor Agonists and Their Pharmacological

FILE REFERENCE: MSB-7296

CURRENT APPLICATION NUMBER: PCT/US03/28093

CURRENT FILING DATE: 2003-09-04

PRIOR APPLICATION NUMBER: US 60/408,696

PRIOR FILING DATE: 2002-09-16

PRIOR APPLICATION NUMBER: US 60/439,369

PRIOR FILING DATE: 2003-01-09

NUMBER OF SEQ ID NOS: 34

SOFTWARE: PatentIn version 3.2

SEQ ID NO 2

LENGTH: 31

TYPE: PRT

ORGANISM: Homo sapiens

PCT-US03-28093-2

Query Match 100.0%; Score 155; DB 1; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

Db 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

RESULT 14

US-10-291-226-124

Sequence 124, Application US/10291226

GENERAL INFORMATION:

APPLICANT: Larsen, Bjarne Due

APPLICANT: Mikkelsen, Jens Mollgaard

APPLICANT: Neve, Soren

TITLE OF INVENTION: NOVEL PEPTIDE AGONISTS OF GLP-1 ACTIVITY

FILE REFERENCE: 55511(45487)

CURRENT APPLICATION NUMBER: US/10/291,226

CURRENT FILING DATE: 2002-11-08

PRIOR APPLICATION NUMBER: US/09/614,847

PRIOR FILING DATE: 2000-07-12

PRIOR APPLICATION NUMBER: US 60/143,591

PRIOR FILING DATE: 1999-07-13

NUMBER OF SEQ ID NOS: 153

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 124

LENGTH: 31

TYPE: PRT

ORGANISM: Homo sapiens

FEATURE:

OTHER INFORMATION: GLP-1(7-37)

US-10-291-226-124

Query Match 100.0%; Score 155; DB 6; Length 31;

Best Local Similarity 100.0%; Pred. No. 1.6e-14;

Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQKEFIAMLVKGR 30

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Db      1  HAEGETSDVSSYLEGQAAKEFIAMLVKGR 30

RESULT 15
US-10-656-405-2
; Sequence 2, Application US/10656405
; GENERAL INFORMATION:
; APPLICANT: Bayer Pharmaceuticals Corporation
; APPLICANT: Pan, Clark
; APPLICANT: Whelan, James
; TITLE OF INVENTION: Modified GIP-1 Receptor Agonists and Their Pharmacological
; FILE REFERENCE: MSB-7296
; CURRENT APPLICATION NUMBER: US/10/656,405
; CURRENT FILING DATE: 2003-09-04
; PRIOR APPLICATION NUMBER: US 60/408,696
; PRIOR FILING DATE: 2002-09-16
; PRIOR APPLICATION NUMBER: US 60/439,369
; PRIOR FILING DATE: 2003-01-09
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 31
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-656-405-2

Query Match      100.0%; Score 155; DB 6; Length 31;
Best Local Similarity 100.0%; Fred. No. 1.6e-14;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1  HAEGETSDVSSYLEGQAAKEFIAMLVKGR 30
        |||
Db      1  HAEGETSDVSSYLEGQAAKEFIAMLVKGR 30

Search completed: October 15, 2003, 11:07:58
Job time : 14.7541 secs
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GenCore version 5.1.6
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QM protein - protein search, using sw model
Run on: October 15, 2003, 10:49:12 ; Search time 24.5902 Seconds
(without alignments)
117.326 Million cell updates/sec

Title: US-09-719-410-4
Perfect score: 155
Sequence: 1 HAEGITFSDVSSYLEQAAKEFIAMLYKGR 30

Scoring table: BL0SUM62
Gapop 10.0 , Gapext 0.5

Searched: 283308 seqs, 9616882 residues
Total number of hits satisfying chosen parameters: 283308

Minimum DB seq length: 0
Maximum DB seq length: 20000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_76:
1: PIR1:
2: PIR2:
3: PIR3:
4: PIR4:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Score	Length	ID	Description
1	155	100.0	158	1	GPCG
2	155	100.0	180	1	GCWU
3	155	100.0	180	1	CCGP
4	155	100.0	180	1	GCRTDU
5	155	100.0	180	1	GCRT
6	155	100.0	180	1	GCHY
7	155	100.0	180	1	GCBY
8	155	100.0	180	2	A57294
9	143	92.3	151	1	GCCH
10	143	92.3	206	2	I31301
11	129	83.2	101	1	GCFFB
12	126	81.3	30	2	B61125
13	126	81.3	30	2	B61125
14	120	77.4	122	1	GCN32
15	118	76.1	66	2	I51093
16	118	76.1	178	2	I51058
17	117	75.5	63	1	GCIDC
18	116	74.8	72	1	GGXA
19	113	72.9	60	1	GCNC
20	113	72.9	178	2	I51057
21	111	71.6	30	2	S44473
22	103	66.5	87	1	GCFFS
23	97	62.6	29	2	S07211
24	96	61.9	31	2	S44472
25	96	61.9	124	1	GCAP
26	95	61.3	29	1	GDF
27	94	60.6	31	2	S44471
28	93	60.0	29	1	GCEN
29	90	58.1	29	1	GCOPV

ALIGNMENTS

RESULT 1

CCPG

glucagon precursor - pig (fragment)
N:Alternate names: glicentin; oxyntomodulin
N:Contains: glicentin-related peptide; glucagon; glucagon-37 (oxyntomodulin); glucagon-37 (oxyntomodulin); glucagon-37 (oxyntomodulin)
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 17-Dec-1982 #sequence revision 31-Mar-1993 #text_change 20-Mar-1998
C:Accession: A01540; A60312; A91781; B32614; A28064
R:Thim, L.; Moody, A.J.
Regul. Pept. 2, 139-150, 1981
A:Title: The primary structure of porcine glicentin (proglucagon).
A:Reference number: A94233; PMID:81248172; PMID:6894800
A:Accession: A01540
A:Molecule type: protein
A:Residues: 1-69 <TH1>
R:Thim, L.; Moody, A.J.
Regul. Pept. Suppl. 2, 833, 1983
A:Title: Primary structure of a possible porcine proglucagon fragment.
A:Reference number: A60312
A:Accession: A60312
A:Molecule type: protein
A:Residues: 1-30 <TH2>
A:Note: This peptide is co-secreted with glucagon from the pancreas
J. Am. Chem. Soc. 79, 2807-2810, 1957
R:Thim, L.; Moody, A.J.
A:Title: The amino acid sequence of glucagon. V. Location of amide groups, acid degradation sites, and the position of the carboxyl group.
A:Reference number: A91781
A:Accession: A91781
A:Molecule type: protein
A:Residues: 33-61 <BRO>
R:Orskov, C.; Bersani, M.; Johnsen, A.H.; Hojrup, P.; Holst, J.J.
J. Biol. Chem. 264, 12826-12829, 1989
A:Title: Complete sequences of glucagon-like peptide-1 from human and pig small intestine.
A:Reference number: A92732; PMID:89327238; PMID:2753890
A:Accession: B32614
A:Molecule type: protein
A:Residues: 78-107 <ORS>
R:Thim, L.; Thim, L.; Orskov, H.; Orskov, C.; Harling, H.; Holst, J.J.
J. Biol. Chem. 263, 8621-8624, 1988
A:Title: Naturally occurring products of proglucagon 111-160 in the porcine and human pancreas.
A:Reference number: A28064; PMID:88243712; PMID:3379036
A:Accession: A28064
A:Molecule type: protein
A:Residues: 111-158 <BUH>
C:Comment: X's represent missing amino acids, mostly basic, that are predicted to exist.
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; insulin; glucagon-69 #status experimental <G69>
F:1-69/Product: glucagon-69 #status experimental <G69>
F:1-30/Region: glicentin-related peptide #status experimental
F:33-69/Product: glucagon-37 #status predicted <G37>
F:78-107/Product: glucagon #status experimental <GCN>
F:78-107/Product: glucagon-like peptide 1 #status experimental <GLI>

glucagon - turkey
glucagon - rabbit
glucagon - Arabian
glucagon - common
glucagon-69 - dog
glucagon - duck
glucagon - ostrich
glucagon - slider
glucagon I - Europ
glucagon - Chichi
extendin-4 - Gila m
glucagon - Europea
extendin-3 - Mexica
glucagon - bowfin
glucagon-36 - spot

F:126-158/Product: glucagon-like peptide 2 #status experimental <GL2>
F:107/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl

Query Match 100.0%; Score 155; DB 1; Length 158;
Best Local Similarity 100.0%; Pred. No. 5.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 78 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 107

RESULT 2
GCGU
glucagon precursor [validated] - human
N:Contains: glucantinin; glucantinin-related polypeptide (GRP2); glucagon; glucagon-like pep
ke peptide 1 (GLP1)
C:Species: Homo sapiens (man)
C:Date: 24-Apr-1984 #sequence_revision 31-Mar-1993 #text_change 08-Dec-2000
C:Accession: A24377; A44197; A30875; A32614; A01541; S23309
R:White, J.W.; Saunders, G.F.
Nucleic Acids Res. 14, 4719-4730, 1986
A:Title: Structure of the human glucagon gene.
A:Reference number: A24377; MUID:86259053; PMID:3725587
A:Accession: A24377
A:Molecule type: DNA
A:Residues: 1-180 <VHT>
A:Cross-references: GB:X03991
R:Ball, G.I.; Sanchez-Pescador, R.; Laybourn, P.J.; Najarian, R.C.
Nature 304, 368-371, 1983
A:Title: Exon duplication and divergence in the human preproglucagon gene.
A:Reference number: A44197; MUID:83271477; PMID:6877358
A:Accession: A44197
A:Molecule type: DNA
A:Residues: 1-179 <BE>
A:Cross-references: GB:V01515; NID:g31777; PIDN:CAA24759.1; PID:g31778
R:Drucker, D.J.; Asa, S.
J. Biol. Chem. 263, 13475-13478, 1988
A:Title: Glucagon gene expression in vertebrate brain.
A:Reference number: A30875; MUID:86330860; PMID:2901414
A:Accession: A30875
A:Molecule type: mRNA
A:Residues: 1-180 <DRD>
A:Cross-references: GB:J04040; NID:g183269; PIDN:AAA52567.1; PID:g183270
R:Orskov, C.; Bersani, M.; Johnsen, A.H.; Hojrup, P.; Holst, J.J.
J. Biol. Chem. 264, 12826-12829, 1989
A:Title: Complete sequences of glucagon-like peptide-1 from human and pig small intestine
A:Reference number: A92732; MUID:89327238; PMID:2753890
A:Accession: A32614
A:Molecule type: protein
A:Residues: 98-127 <ORS>
R:Thomsen, J.; Kristiansen, K.; Brunfeldt, K.; Sundby, F.
FEBS Lett. 21, 315-319, 1972
A:Title: The amino acid sequence of human glucagon.
A:Reference number: A91373
A:Accession: A01541
A:Molecule type: protein
A:Residues: 53-81 <PHO>
R:Tsuigita, A.; Takamoto, K.; Kamo, K.; Iwade, H.
Eur. J. Biochem. 206, 691-696, 1992
A:Title: C-terminal sequencing of protein. A novel partial acid hydrolysis and analysis
A:Reference number: S23309
A:Accession: S23309
A:Molecule type: protein
A:Residues: 53-81 <RSO>
C:Comment: In pancreatic alpha-cells, proglucagon is processed to glucantinin-related poly
stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucagon-
dulin.
C:Genetics:
A:Gene: GDB:GCG
A:Cross-references: GDB:119265; OMIM:138030
A:Map position: 2q36-2q37
A:Introns: 31/2; 65/2; 131/2; 179/2

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; in
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status experimental <PGC>
F:21-89/Product: glucantinin #status experimental <GLN>
F:21-50/Product: glucantinin-related polypeptide #status predicted <GRPP>
F:53-89/Product: oxyntomodulin #status experimental <OXN>
F:53-81/Product: glucagon #status experimental <GCN>
F:92-178/Product: major proglucagon fragment #status experimental <MPGF>
F:92-127/Product: glucagon-like peptide 1 #status experimental <GL1>
F:98-127/Product: truncated glucagon-like peptide 2 #status experimental <TGL>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from following

Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 98 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 127

RESULT 3
GCGP
glucagon precursor - guinea pig
N:Alternate names: oxyntomodulin
N:Contains: glucantinin-related peptide; glucagon; glucagon-37 (oxyntomodulin); glucag
C:Species: Cavia porcellus (guinea pig)
C:Date: 30-Sep-1987 #sequence_revision 31-Dec-1992 #text_change 16-Jun-2000
C:Accession: A24856; A23849; A60323
R:Seino, S.; Welsh, M.P.; Bell, G.I.; Chan, S.J.; Steiner, D.F.
FEBS Lett. 203, 25-30, 1986
A:Title: Mutations in the guinea pig preproglucagon gene are restricted to a specifi
A:Reference number: A24856; MUID:86248118; PMID:3755107
A:Accession: A24856
A:Molecule type: mRNA
A:Residues: 1-180 <SEJ>
A:Cross-references: DDBJ:D00014; GB:N00014; NID:g220288; PIDN:BAA00010.1; PID:g220288;
R:Huang, C.G.; Eng, J.; Fan, Y.C.E.; Hulmes, J.D.; Yalow, R.S.
Diabetes 35, 508-512, 1986
A:Title: Guinea pig glucagon differs from other mammalian glucagons.
A:Reference number: A23849; MUID:86165412; PMID:3956884
A:Accession: A23849
A:Molecule type: protein
A:Residues: 53-81 <HVA>
R:Conlon, J.M.; Hansen, H.F.; Schwartz, T.W.
Regul. Pept. 11, 309-320, 1985
A:Title: Primary structure of glucagon and a partial sequence of oxyntomodulin (gluc
A:Reference number: A60323; MUID:86017849; PMID:4048553
A:Accession: A60323
A:Molecule type: protein
A:Residues: 53-81 <CON>
A:Note: glucagon-37 was not completely sequenced
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pa
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: glucantinin-related peptide #status predicted
F:53-89/Product: glucagon-37 (oxyntomodulin) #status predicted
F:53-81/Product: glucagon #status experimental <GCN>
F:98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F:145-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from following

Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 98 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 127

RESULT 4
GCTDU
glucagon precursor - degu
N:Contains: gliocentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
C:Species: Octodon degus (degu)
C>Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
C:Accession: C36118
R:Nishi, M.; Steiner, D.F.
Mol. Endocrinol. 4, 1192-1198, 1990
A:Title: Cloning of complementary DNAs encoding islet amyloid polypeptide, insulin, and
A:Reference number: A36118; MUID:91155952; PMID:2293024
A:Accession: C36118
A:Molecule type: mRNA
A:Residues: 1-180 <NTS>
A:Cross-references: GB:M57688; NID:g202467; PIDN:AAA40588.1; PID:g202468
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <SIG>
F:21-50/Region: gliocentin-related peptide #status predicted
F:53-81/Product: glucagon-like peptide 1 #status predicted <GCN>
F:98-127/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl
Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 30
DB 98 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 127
RESULT 5
GCTP
glucagon precursor - rat
N:Contains: gliocentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
C:Species: Rattus norvegicus (Norway rat)
C>Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 26-Feb-1999
C:Accession: A22655; A25190; A44198
R:Heinrich, G.; Gros, P.; Habener, J.F.
J. Biol. Chem. 259, 14082-14087, 1984
A:Title: Glucagon gene sequence: four of six exons encode separate functional domains of
A:Reference number: A22655; MUID:85054853; PMID:6094539
A:Accession: A22655
A:Molecule type: DNA
A:Residues: 1-180 <HE1>
A:Cross-references: EMBL:K02809
A:Note: the authors translated the codon TTG for residue 10 as Glu and ACC for residue 5
R:Mojsov, S.; Heinrich, G.; Wilson, I.B.; Ravazzola, M.; Orci, L.; Habener, J.F.
J. Biol. Chem. 261, 11880-11889, 1986
A:Title: Preproglucagon gene expression in pancreas and intestine diversifies at the lev
A:Reference number: A25190; MUID:86304324; PMID:3528148
A:Accession: A25190
A>Status: not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-180 <QO>
R:Heinrich, G.; Gros, P.; Lund, P.K.; Bentley, R.C.; Habener, J.F.
Endocrinology 115, 2176-2181, 1984
A:Title: Pre-proglucagon messenger ribonucleic acid: nucleotide and encoded amino acid s
A:Reference number: A44198; MUID:85051023; PMID:6548696
A:Accession: A44198
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-180 <HE2>
A:Cross-references: GB:K02809; GB:K02810; GB:K02811; GB:K02812
C:Genetics:
A:Introns: 31/2; 85/2; 131/2; 175/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>

F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: gliocentin-related peptide #status predicted
F:53-81/Product: glucagon #status predicted <GCN>
F:98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F:146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 30
DB 98 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 127
RESULT 6
GCHV
glucagon precursor - golden hamster
N:Contains: gliocentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-l
C:Species: Mesocricetus auratus (golden hamster)
C>Date: 13-Jun-1983 #sequence_revision 13-Jun-1983 #text_change 20-Mar-1998
C:Accession: A01539
R:Beil, G.I.; Sauter, R.F.; Mullenbach, G.T.
Nature 302, 716-718, 1983
A:Title: Hamster preproglucagon contains the sequence of glucagon and two related pe
A:Reference number: A01539; MUID:83167563; PMID:6835407
A:Accession: A01539
A:Molecule type: mRNA
A:Residues: 1-180 <BE1>
A:Cross-references: EMBL:J00059
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pe
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-50/Region: gliocentin-related peptide #status predicted
F:53-81/Product: glucagon-like peptide 1 #status predicted <GCN>
F:98-127/Product: glucagon-like peptide 2 #status predicted <GL2>
F:146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F:127/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 30
DB 98 HAEGETFSDVSSYLEGQAQKEFIANLVKGR 127
RESULT 7
GCMO
glucagon precursor - bovine
N:Contains: gliocentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-l
C:Species: Bos primigenius taurus (cattle)
C>Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 20-Mar-1998
C:Accession: A93970; A92081; A01538
R:Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, G.F.
Proc. Natl. Acad. Sci. U.S.A. 80, 5485-5489, 1983
A:Title: Mammalian pancreatic preproglucagon contains three glucagon-related peptide
A:Reference number: A93970; MUID:83299996; PMID:6577439
A:Accession: A93970
A:Molecule type: mRNA
A:Residues: 1-180 <LOP>
A:Cross-references: EMBL:K00107
R:Bromer, W.W.; Boucher, M.E.; Koffenberger Jr., J.E.
J. Biol. Chem. 246, 2822-2827, 1971
A:Title: Amino acid sequence of bovine glucagon.
A:Reference number: A92081; MUID:71166445; PMID:5102927
A:Accession: A92081
A:Molecule type: protein
A:Residues: 53-81 <BRO>
C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-180/Product: proglucagon #status predicted <PGC>
F:21-180/Region: glucagon-like peptide #status predicted
F:53-81/Product: glucagon #status experimental <GCN>
F:98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F:146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F:147/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl
Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15; Mismatches 0; Indels 0; Gaps 0;
Matches 30; Conservative 0;
QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 98 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 127
RESULT 8
A57294
glucagon precursor - mouse
C:Species: Mus musculus (house mouse)
C:Date: 01-Dec-1995 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
R:Kocherberg, M.E.; Ellertson, C.D.; Klein, K.; Zhou, Y.; Lindberg, I.; McDonald, J.K.;
J. Biol. Chem. 270, 10136-10146, 1995
A:Title: Processing of mouse proglucagon by recombinant prohormone convertase 1 and immu
A:Reference number: A57294; PMID:7730317
A:Accession: A57294
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-180 <ROT>
A:Cross-references: EMBL:Z46845; NID:g599880; PIDN:CAA86902.1; PID:g599881
C:Superfamily: glucagon
C:Keywords: carbohydrate metabolism; duplication; hormone; pancreas
Query Match 100.0%; Score 155; DB 2; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15; Mismatches 0; Indels 0; Gaps 0;
Matches 30; Conservative 0;
QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 98 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 127
RESULT 9
GCCH
glucagon precursor - chicken
N:Contains: glucagon; glucagon-like peptide 1
C:Species: Gallus gallus (chicken)
C:Date: 31-Dec-1991 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
R:Hasegawa, S.; Terazono, K.; Natta, K.; Takada, T.; Yamamoto, H.; Okamoto, H.
FEBS Lett. 264, 117-120, 1990
A:Title: Nucleotide sequence determination of chicken glucagon precursor cDNA. Chicken H
A:Reference number: S09992; PMID:90249492; PMID:2338135
A:Accession: S09992
A:Molecule type: mRNA
A:Residues: 1-151 <HAS>
A:Cross-references: EMBL:X07539; NID:g63749; PIDN:CAA58827.1; PID:g63750
R:Pollock, H.G.; Kimmel, J.R.
J. Biol. Chem. 250, 9377-9380, 1975
A:Title: Chicken glucagon. Isolation and amino acid sequence studies.
A:Reference number: A92189; PMID:76069271; PMID:1194290
A:Accession: A92189
A:Molecule type: protein
A:Residues: 55-83 <POL>
R:Huang, J.; Eng, J.; Yalow, R.S.
Horm. Metab. Res. 19, 542-544, 1987
A:Title: Chicken glucagon: sequence and potency in receptor assay.
A:Reference number: A60836; PMID:88113418; PMID:2828209
A:Accession: A60836
A:Molecule type: protein

A:Residues: 55-83 <HVA>
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pa
F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-151/Product: proglucagon #status predicted <PGC>
F:55-83/Product: glucagon #status experimental <GCN>
F:118-147/Product: glucagon-like peptide 1 #status predicted <GL1>
F:147/Modified site: amidated carboxyl end (Arg) (amide in mature form from followin
Query Match 92.3%; Score 143; DB 1; Length 151;
Best Local Similarity 86.7%; Pred. No. 2.8e-13; Mismatches 3; Indels 0; Gaps 0;
Matches 26; Conservative 3;
QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 118 HAEGTFTSDVSYLGGQAQKEFIAMLVNGR 147
RESULT 10
I51301
proglucagon - chicken
C:Species: Gallus gallus (chicken)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
R:Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A:Title: Front and chicken proglucagon: alternative splicing generates mRNA transcri
A:Reference number: A55895; PMID:95395739; PMID:7776976
A:Accession: I51301
A:Status: preliminary; translated from GE/EMBL/DDBJ
A:Molecule type: mRNA
A:Residues: 1-206 <IRW>
A:Cross-references: GB:S78477; NID:g999386; PIDN:AA834506.1; PID:g999387
C:Superfamily: glucagon
C:Keywords: duplication
Query Match 92.3%; Score 143; DB 2; Length 206;
Best Local Similarity 86.7%; Pred. No. 4e-13; Mismatches 3; Indels 0; Gaps 0;
Matches 26; Conservative 3;
QY 1 HAEGTFTSDVSYLGGQAQKEFIAMLVKGR 30
DB 118 HAEGTFTSDVSYLGGQAQKEFIAMLVNGR 147
RESULT 11
GCFCB
glucagon precursor - bullfrog (fragments)
N:Alternate names: oxyntomodulin
N:Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1; glucagon
C:Species: Rana catesbeiana (bullfrog)
C:Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
R:Pollock, H.G.; Hamilton, J.W.; Rouse, J.B.; Ebner, K.E.; Rawitch, A.B.
J. Biol. Chem. 263, 9746-9751, 1988
A:Title: Isolation of peptide hormones from the pancreas of the bullfrog (Rana catesi
A:Reference number: A92730; PMID:88257102; PMID:3260236
A:Accession: B28091
A:Molecule type: protein
A:Residues: 1-36 <PO2>
A:Accession: C28091
A:Molecule type: protein
A:Residues: 37-68 <POL>
A:Accession: D28091
A:Molecule type: protein
A:Residues: 69-101 <PO3>
C:Superfamily: glucagon
C:Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F:1-36/Product: glucagon-36 (oxyntomodulin) #status experimental <G36>
F:1-25/Product: glucagon #status predicted <GCN>
F:37-67/Product: glucagon-like peptide 1 #status experimental <GL1>
F:89-101/Product: glucagon-like peptide 2 #status experimental <GL2>

```
Query Match      83.2%; Score 129; DB 1; Length 101;
Best Local Similarity 76.7%; Pred. No. 2e-11;
Matches 23; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFTIANLVKGR 30
DB 37 HADGTTSDVSSYLEGQAAKEFTVWLKGR 66

RESULT 12
glucagon-like peptide - American eel
C:Species: Anguilla rostrata (American eel)
C>Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C:Accession: B61125
R:Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A:Title: The primary structure of glucagon-like peptide but not insulin has been conserv
A:Reference number: A61125; MUID:91340068; PMID:1874385
A:Accession: B61125
A:Molecule type: protein
A:Residues: 1-30 <CON>
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication
F:1-30/Product: glucagon-like peptide #status experimental <GLP>
F:30/Modified site: amidated carboxyl end (Arg) #status predicted

Query Match      81.3%; Score 126; DB 2; Length 30;
Best Local Similarity 76.7%; Pred. No. 1.4e-11;
Matches 23; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFTIANLVKGR 30
DB 1 HAEGTFTSDVSSYLEGQAAKEFTVWLKGR 30

RESULT 13
glucagon-like peptide - European eel
C:Species: Anguilla anguilla (European eel)
C>Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C:Accession: C61125
R:Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A:Title: The primary structure of glucagon-like peptide but not insulin has been conserv
A:Reference number: A61125; MUID:91340068; PMID:1874385
A:Accession: C61125
A:Molecule type: protein
A:Residues: 1-30 <CON>
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication
F:1-30/Product: glucagon-like peptide #status experimental <GLP>
F:30/Modified site: amidated carboxyl end (Arg) #status experimental

Query Match      81.3%; Score 126; DB 2; Length 30;
Best Local Similarity 76.7%; Pred. No. 1.4e-11;
Matches 23; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFTIANLVKGR 30
DB 1 HAEGTFTSDVSSYLEGQAAKEFTVWLKGR 30

RESULT 14
glucagon 2 precursor - American goosefish
N:Contains: glucagon; glucagon-like peptide 1
C:Species: Lophius americanus (American goosefish)
C>Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Jul-2000
C:Accession: A05150
R:Lund, P.X.; Goodman, R.H.; Montminy, M.R.; Dee, P.C.; Habener, J.F.
J. Biol. Chem. 258, 3280-3284, 1983
A:Title: Anglerfish islet pre-proglucagon II. Nucleotide and corresponding amino acid se
```

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A:Reference number: A05150; MUID:83135785; PMID:6338015
A:Accession: A05150
A:Molecule type: mRNA
A:Residues: 1-122 <UN>
A:CROSS-references: GB:J00933; MID:g64021; PIDN:CAR23905.1; PID:g64022
C:Superfamily: glucagon
C:Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F:1-21/Domains: signal sequence #status predicted <SIG>
F:22-122/Product: proglucagon 2 #status predicted <PAC2>
F:52-80/Product: glucagon #status predicted <GCN>
F:89-119/Product: glucagon-like peptide 1 #status predicted <GL1>

Query Match      77.4%; Score 120; DB 1; Length 122;
Best Local Similarity 70.0%; Pred. No. 4.8e-10;
Matches 21; Conservative 6; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFTIANLVKGR 30
DB 89 HADGTYTSDVSSYLODQAARKDFVSWLKAGR 118

RESULT 15
glucagon - chinook salmon (fragment)
C:Species: Oncorhynchus tshawytscha (chinook salmon)
C>Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C:Accession: I51093
R:Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A:Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcri
A:Reference number: A55895; MUID:95295739; PMID:7776976
A:Accession: I51093
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-66 <LRW>
A:CROSS-references: EMBL:U19920; NID:g736366; PIDN:AAC59670.1; PID:g736367
C:Superfamily: glucagon
C:Keywords: duplication

Query Match      76.1%; Score 118; DB 2; Length 66;
Best Local Similarity 66.7%; Pred. No. 4.9e-10;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFTIANLVKGR 30
DB 33 HADGTYTSDVSTILODQAARKDFVSWLKSGR 62

Search completed: October 15, 2003, 10:56:43
Job time : 24.5902 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model
Run on: October 15, 2003, 10:35:56 ; Search time 13.2787 Seconds
(without alignments)
106.245 Million cell updates/sec

Title: US-09-719-410-4
Perfect score: 155
Sequence: 1 HADGTFDSVSLQGAKEFIAMLYKGR 30

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 127863 seqs, 47026705 residues

Total number of hits satisfying chosen parameters: 127863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_41.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	155	100.0	158	1	GLUC_PIG
2	155	100.0	180	1	GLUC_BOVIN
3	155	100.0	180	1	GLUC_CAVPO
4	155	100.0	180	1	GLUC_HUMAN
5	155	100.0	180	1	GLUC_MESAU
6	155	100.0	180	1	GLUC_MOUSE
7	155	100.0	180	1	GLUC_OCTDE
8	155	100.0	180	1	GLUC_RAT
9	143	92.3	206	1	GLUC_CHICK
10	137	88.4	204	1	GLUC_HELSE
11	129	83.2	103	1	GLUC_FANCA
12	126	81.3	30	1	GLUC_ANGAN
13	125	80.6	266	1	GLUC_XENLA
14	120	77.4	122	1	GLUC_LOPAM
15	120	77.4	219	1	GLUC_XENLA
16	116	74.8	71	1	GLUC_ICTPU
17	116	74.8	78	1	GLUC_LEPSP
18	114	73.5	71	1	GLUC_PNAME
19	113	72.9	68	1	GLUC_ONCKI
20	110.5	71.3	33	1	GLUC_ORENI
21	110	71.0	121	1	GLUC_CARAU
22	103	66.5	96	1	GLUC_MYOSC
23	102	65.8	160	1	GLUC_PETMA
24	97	62.6	29	1	GLUC_TORMA
25	96	61.9	124	1	GLUC_LOPAM
26	95	61.3	62	1	GLUC_SCYCA
27	93	60.0	29	1	GLUC_CALMI
28	90	58.1	29	1	GLUC_DIDMA
29	90	58.1	29	1	GLUC_LAMFL
30	90	58.1	29	1	GLUC_RABIT
31	90	58.1	26	1	GLUC_ORENI
32	90	58.1	69	1	GLUC_CANFA
33	88	56.8	23	1	GLUC_ANAPL

P31297 chinchilla
P26349 heloderma s
P23062 platichthys
P20394 heloderma h
P33528 amia calva
O9pur0 petromyzon
P09682 hydrolagus
P09680 bos taurus
P01281 sus scrofa
P48756 mus musculus
Q06145 rattus norv
P09681 homo sapien

ALIGNMENTS

RESULT 1
GLUC_PIG
ID GLUC_PIG STANDARD; PRT; 158 AA.
AC P01274:
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-NOV-1990 (Rel. 16, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucicentin; Glucicentin-related polypeptide
DE (GRPP); Glucagon; glucagon-like peptide 1 (GLP1); Glucagon-like
DE peptide 2 (GLP2)] (Fragment).
GN GCG.
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID:9823;
RN [1]
RP SEQUENCE OF 1-69.
RX MEDLINE=81248172; PubMed=6594800;
RA Thim L., Moody A.J.;
RT "The primary structure of porcine glucicentin (proglucagon).";
RL Regul. Pept. 2:139-150(1981).
RN [2]
RP SEQUENCE OF 1-69.
RX MEDLINE=82221776; PubMed=7045833;
RA Thim L., Moody A.J.;
RT "The amino acid sequence of porcine glucicentin.";
RL Peptides 2 Suppl. 2:37-39(1981).
RN [3]
RP SEQUENCE OF 33-61.
RA Bromer W.W., Sinn L.G., Behrens O.K.;
RT "The amino acid sequence of glucagon. V. Location of amide groups,
RT acid degradation studies and summary of sequential evidence.";
RL J. Am. Chem. Soc. 79:2807-2810(1957).
RN [4]
RP SEQUENCE OF 78-107.
RX MEDLINE=89327238; PubMed=2753890;
RA Orskov C., Bersani M., Johansen A.H., Hoejrup P., Holst J.J.;
RT "Complete sequences of glucagon-like peptide-1 from human and pig
RT small intestine.";
RL J. Biol. Chem. 264:12826-12829(1989).
RN [5]
RP SEQUENCE OF 111-158.
RX MEDLINE=98243712; PubMed=3379036;
RA Buhl T., Thim L., Korod H., Orskov C., Harling H., Holst J.J.;
RT "Naturally occurring products of proglucagon 111-160 in the porcine
RT and human small intestine.";
RL J. Biol. Chem. 263:8621-8624(1988).
RN [6]
RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS).
RX MEDLINE=76051297; PubMed=171582;
RA Sasaki K., Dockerill S., Adamak D.A., Tickle I.J., Blundell T.L.;
RT "X-ray analysis of glucagon and its relationship to receptor
RT binding.";
RL Nature 257:751-757(1975).
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.

CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -1- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLGY WITH
CC HUMAN SEQUENCE.
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC PDB: 1GCH; 30-SEP-83.
CC InterPro: IPR000532; Glucagon.
CC Pfam: PF00123; hormone2; 3.
CC SMART: SM00070; Gluca; 3.
CC PROSITE: PS00260; GLUCAGON; 3.
KW Glucagon family; Hormone; Cleavage on pair of basic residues;
KW 3d-structure. 1 1
FT NON_TER 1 1
FT PEPTIDE 1 69 GLICENTIN.
FT PEPTIDE 1 30 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 1 30 GLUCAGON.
FT PEPTIDE 33 61 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 78 107 GLUCAGON-LIKE PEPTIDE 2.
FT PEPTIDE 126 158 GLUCAGON-LIKE PEPTIDE 2.
FT HELIX 39 42
FT TURN 43 45
FT TURN 46 55
FT TURN 56 58
SQ SEQUENCE 158 AA; 18212 MW; 28C6FCF257F333B2 CRC64;
Query Match 100.0%; Score 155; DB 1; Length 158;
Best Local Similarity 100.0%; Pred. No. 5.5e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETSDVSSYLEGQAQAKFEIWLKGR 30
DB 78 HAEGETSDVSSYLEGQAQAKFEIWLKGR 107
RESULT 2
GLUC_BOVIN
ID GLUC_BOVIN STANDARD; PRT; 180 AA.
AC P01272;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucocorticoid-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=83299996; PubMed=6577439;
RA Lopez L.C., Frazier M.L., Su C.-J., Kumar A., Saunders G.F.;
RT "Mammalian pancreatic preproglucagon contains three glucagon-related
RT peptides";
RL Proc. Natl. Acad. Sci. U.S.A. 80:5485-5489(1983).
RW [2]
RX SEQUENCE OF 53-81.
RA Bromer W.W., Boucher M.E., Koffenberger J.E. Jr.;
RT "Amino acid sequence of bovine glucagon";
RL J. Biol. Chem. 246:2822-2827(1971).
RN [3]
RP STRUCTURE BY NMR OF 53-81.
RX MEDLINE=71166445; PubMed=5102927;
RA Braun W., Wider G., Lee K.H., Wuthrich K.;
RT "Conformation of glucagon in a lipid-water interphase by 1H nuclear
RT magnetic resonance";
RL J. Mol. Biol. 159:921-948(1983).
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND

CC RAISES THE BLOOD SUGAR LEVEL.
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: K00107; AAA30538.1; -
CC PDB: 1KX6; 13-FEB-02.
CC InterPro: IPR000532; Glucagon.
CC Pfam: PF00123; hormone2; 3.
CC PRINTS: PR00275; GLUCAGON.
CC SMART: SM00070; Gluca; 3.
CC PROSITE: PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW 3d-structure. 1 20
FT SIGNAL 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON.
FT PROPEP 84 89
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 142
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT TURN 60 64
FT TURN 74 74
FT TURN 75 78
FT HELIX 75 78
SQ SEQUENCE 180 AA; 20944 MW; 8D9B4FF05B9F15FF CRC64;
Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETSDVSSYLEGQAQAKFEIWLKGR 30
DB 98 HAEGETSDVSSYLEGQAQAKFEIWLKGR 127
RESULT 3
GLUC_CAVPO
ID GLUC_CAVPO STANDARD; PRT; 180 AA.
AC P05110;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucocorticoid-related polypeptide (GRPP);
DE Glucagon; Glucagon-37 (Oxyntomodulin); Glucagon-like peptide 1 (GLP1);
DE Glucagon-like peptide 2 (GLP2)].
GN GCG.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86245118; PubMed=3755107;
RA Saino S., Welsh X., Bell G.I., Chan S.J., Steiner D.F.;
RT "Mutations in the guinea pig preproglucagon gene are restricted to a
RT specific portion of the prohormone sequence";
RL FEBS Lett. 203:25-30(1986).
RN [2]
RP SEQUENCE OF 53-81.
RX MEDLINE=86165412; PubMed=3956884;
RA Huang C.G., Eng J., Pan Y.-C.E., Hulmes J.D., Yalow R.S.;
RT "Guinea pig glucagon differs from other mammalian glucagons";

RL Diabetes 35:508-512(1986).
RW [3]
RP PARTIAL SEQUENCE OF 53-89.
RX MEDLINE=86017849; PubMed=4048553;
RA Conlon J.M., Hansen H.F., Schwartz T.W.;
RT "Primary structure of glucagon and a partial sequence of
RT oxyntomodulin (Glucagon-37) from the guinea pig.";
RL Regul. Pept. 11:309-320(1985).
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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CC or send an email to license@sib-sib.ch).
CC -----
DR EMBL; D00014; BAA00010.1; -.
DR PIR; A24856; GCGP.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON-37.
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143 GLUCAGON-LIKE PEPTIDE 2.
FT PEPTIDE 146 178
SQ SEQUENCE 180 AA; 20972 MW; 702FB181161D2776 CRC64;

Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGETSPVSGYLEGQAAKEFIWLVKGR 30
DB 98 HREGTFISDVSYLEGQAQAEFIWLVKGR 127

RESULT 4
ID GLUC_HUMAN STANDARD; PRI: 180 AA.
AC P01275;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 15-SEP-2003 (Rel. 42, Last annotation update)
DE Glucagon precursor [contains: Glucocentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=88330860; PubMed=2901414;
RA Drucker D.J., Asa S.;
RT "Glucagon gene expression in vertebrate brain.";
RL J. Biol. Chem. 263:13475-13478(1988).
CC -----

RN SEQUENCE FROM N.A.
RX MEDLINE=86259053; PubMed=3725587;
RA White J.W., Saunders G.F.;
RT "Structure of the human glucagon gene.";
RL Nucleic Acids Res. 14:4719-4730(1986).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=83271477; PubMed=6877358;
RA Bell G.I., Sanchez-Pescador R., Laybourn P.J., Najarian R.C.;
RT "Exon duplication and divergence in the human preproglucagon gene.";
RL Nature 304:368-371(1983).
RN [4]
RP SEQUENCE FROM N.A.
RC TISSUE=Pancreas;
RX MEDLINE=22388257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshyiuki S., Carninci P., Prange C.,
RA Raha S.S., Iqbalilano N.A., Peters G.J., Abramson R.D., Miliady S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield V.S.N., Krzywinski M.I., Skalska U., Smalls D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length
RT human and mouse cDNA sequences".
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [5]
RP SEQUENCE OF 53-81.
RA Thomsen J., Kristiansen K., Brunfeldt K., Sundby F.;
RT "The amino acid sequence of human glucagon.";
RL FEBS Lett. 21:315-319(1972).
RN [6]
RP SEQUENCE OF 98-127.
RX MEDLINE=89327238; PubMed=2753890;
RA Orskov C., Bersani M., Johnsen A.H., Hoejrup P., Holst J.J.;
RT "Complete sequences of glucagon-like peptide-1 from human and pig
RT small intestine.";
RL J. Biol. Chem. 264:12826-12829(1989).
RN [7]
RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS) OF 53-81.
RX MEDLINE=98334683; PubMed=9667960;
RA Sturm N.S., Lin Y., Burley S.K., Krstenansky J.L., Ahn J.M.,
RA Azizeh B.Y., Trivedi D., Hruby V.J.;
RT "Structure-function studies on positions 17, 18, and 21 replacement
RT analogues of glucagon: the importance of charged residues and salt
RT bridges in glucagon biological activity.";
RL J. Med. Chem. 41:2693-2700(1998).
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- INDUCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -!- IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- PHARMACEUTICAL: Available under the names Glucagon (Eli Lilly) and
CC Glucagon or Glucagon Novo Nordisk (Novo Nordisk). Used to treat
CC severe hypoglycemia in insulin-dependent diabetics.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC -!- DATABASE: NAME-Glucagon at Eli Lilly;
CC NOTE-Clinical information on Eli Lilly
CC WWW="http://www.lillydiabetes.com/Products/Patientinfo.cfm".
CC -----

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DR EMBL; J04040; ARA52567.1; -
DR EMBL; X03991; CRA27627.1; -
DR EMBL; V01515; CRA24759.1; -
DR EMBL; BC005278; AAR05278.1; -
DR PIR; A24377; GCHU.
DR PDB; 1BH0; 18-NOV-98.
DR PDB; 1D08; 23-OCT-02.
DR GeneW; RCNC:4191; GCG.
DR MIM; 338030; -
DR MIM; 331330; -

DR GO; GO:0003625; C:soluble fraction; TAS.
DR GO; GO:000283; P:cell proliferation; TAS.
DR GO; GO:0007631; P:feeding behavior; TAS.
DR GO; GO:0007186; P:6-protein coupled receptor protein signalin. . .; TAS.
DR GO; GO:0007165; P:signal transduction; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR SMART; SM00070; GLUCA; 3.

DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Pharmaceutical; 3D-structure; Polymorphism.
FT SIGNAL 1 20 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 21 50 GLUCAGON.
FT PROPEP 53 81
FT PROPEP 84 96
FT PEPTIDE 98 127 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT VARIANT 115 115 A->V (IN dbSNP:5650).
FT CONFLICT 82 82 /FTID=VAR_014596.
FT TURN 59 62 K->N (IN REF. 3).
FT HELIX 53 77
FT TURN 78 79

Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFTSDVSSYLEGQAQAEFTAWLVKGR 30
DB 98 HAEGETFTSDVSSYLEGQAQAEFTAWLVKGR 127
|||||
RESULT 5
GLUC_MESAU STANDARD; PRT; 180 AA.
AC P01273;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucagon-related polypeptide (GRP)];
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Mesocricetus auratus (Golden hamster).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
OC Mesocricetus.
OX NCBI_TaxID=10036;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=63167563; Pubmed=6835407;
RA Bell G.I., Santerre R.F., Mullenbach G.T.;

RT "Hamster preproglucagon contains the sequence of glucagon and two
RT related peptides".
RL Nature 302:716-718(1983).
RN (2)
RP REVISIONS TO 12-15.
RA Bell G.I.;

RL Submitted (XX-1985) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLOS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.

CC -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC -----

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CC or send an email to license@isb-sib.ch).
CC -----

DR EMBL; J00059; AAA37074.1; -
DR HSSP; P01274; LGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL 1 20
FT PEPTIDE 21 50 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 53 81 GLUCAGON.
FT PROPEP 84 89
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PEPTIDE 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT SEQUENCE 180 AA; 20954 MW; 02791B49D7AADDAB CRC64;

Query Match 100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HAEGETFTSDVSSYLEGQAQAEFTAWLVKGR 30
DB 98 HAEGETFTSDVSSYLEGQAQAEFTAWLVKGR 127
|||||
RESULT 6
GLUC_MOUSE STANDARD; PRT; 180 AA.
AC P55095;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucagon-related polypeptide (GRP)];
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)].
GN GCG.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX TISSUE=Pancratic islets;
RX MEDLINE=95247722; Pubmed=7730317;
RA Rothberg M.E., Milertson C.D., Klein K., Zhou Y., Linberg I.,
RA McDonald J.K., Mackin R.B., Noe B.D.;
RP "Processing of mouse proglucagon by recombinant prohormone convertase
RP 1 and immunopurified prohormone convertase 2 in vitro."
RL J. Biol. Chem. 270:10136-10146(1995).

```

Mol. Endocrinol. 4:1192-1198(1990)).
-1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL.
-1- FUNCTION: GLP2 SMALL INTESTINE, CONCENTRANT WITH UPREGULATED CRYPT HEIGHT IN THE SMALL INTESTINE, CONCENTRANT WITH INCREASED CRYPT CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
-1- INDUCTION: PRODUCED IN THE A CELLS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
-1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
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-----
ENGL; M57688; AAA40588.1; "
DR PUR; C36118; GCFWDU.
DR HSP; P01274; LGCN.
DR InterPro; IPR000352; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 4.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal; Amidation.
KW SIGNAL.
FT          1   20
FT PEPTIDE    21   50      GLICENTIN-RELATED POLYPEPTIDE.
FT PPHE     53   81
FT PROPPE    84   89      GLUCAGON.
FT PPHE     92  127      GLUCAGON-LIKE PEPTIDE 1.
FT PROPPE   131  142      GLUCAGON-LIKE PEPTIDE 2.
FT PPHE     146  178      AMIDATION (G-128 PROVIDE AMIDE GROUP).
FT MOD_RES   127  127
KW SEQUENCE 180 AA; 21165 MW; 65883616A9A3051 CRC64;
Query Match      100.0%; Score 155; DB 1; Length 180;
Best Local Similarity 100.0%; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY      1 HAEQTTSDVSSYLEGOAAKEFIATLVKGR 30
DB      98 HAEQTTSDVSSYLEGOAAKEFIATLVKGR 127
        |||||
RESULT 8
GLUC_RAT STANDARD; PRT; 180 AA.
AC P06883;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-JAN-1988 (Rel. 06, Last sequence update)
DT 28-FEB-2003 (Rel. 43, Last annotation update)
DE Glucagon precursor [Contains: Glucicentin-related polypeptide (GRP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GRP2)].
DN GCG.
GC Rattus norvegicus (Rat).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OX Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
[1]
RP SEQUENCE FROM N.A.
RX MEDLINE=85054853; PubMed=6094539;
RA Heinrich G., Gros P., Habener J.F.;
RT "Glucagon gene sequence. Four of six exons encode separate functional domains of rat pre-proglucagon."
KL J. Biol. Chem. 259:14082-14087(1984).
[2]
RP SEQUENCE FROM N.A.
RX MEDLINE=85051023; PubMed=6548696;
RA Heinrich G., Gros P., Lund P.K., Bentley R.C., Habener J.F.
```

RT "Pre-proglucagon messenger ribonucleic acid: nucleotide and encoded
RT amino acid sequences of the rat pancreatic complementary
RT deoxyribonucleic acid".
RL Endocrinology 115:2176-2181(1984).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86304324; PubMed=3528148;
RA Mojsos S., Heinrich G., Wilson I.B., Ravazzola M., Orci L.,
RA Habener J.F.;
RT "Preproglucagon gene expression in pancreas and intestine diversifies
RT at the level of post-translational processing".
RL J. Biol. Chem. 261:11880-11889(1986).
CC -1- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND
CC RAISES THE BLOOD SUGAR LEVEL.
CC -1- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
CC HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CC CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC -----
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CC -----
DR EMBL; K02813; AAA41235.1; .
DR EMBL; K02809; AAA41235.1; JOINED.
DR EMBL; K02810; AAA41235.1; JOINED.
DR EMBL; K02811; AAA41235.1; JOINED.
DR EMBL; K02812; AAA41235.1; JOINED.
DR PIR; A22655; GCRT.
DR HSSP; P01274; IGCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; Hormone; Cleavage on pair of basic residues; Signal.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT SIGNAL
FT 1 20 GLICENTIN-RELATED POLYPEPTIDE.
FT PEPTIDE 21 50
FT PROPEP 53 81 GLUCAGON.
FT PROPEP 84 89
FT PEPTIDE 92 128 GLUCAGON-LIKE PEPTIDE 1.
FT PROPEP 131 143
FT PROPEP 146 178 GLUCAGON-LIKE PEPTIDE 2.
FT PEPTIDE 146 178
SQ SEQUENCE 180 AA; 20846 MF; 76931409D03C7978 CRC64;

Query Match 100.08; Score 155; DB 1; Length 180;
Best Local Similarity 100.08; Pred. No. 6.3e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HAEGFTSDVSSYLEGQAQAEFIANLVKGR 30
Db 98 HAEGFTSDVSSYLEGQAQAEFIANLVKGR 127
|||||
|||||

RESULT 9

GLUC_CHICK
ID GLUC_CHICK STANDARD; PRT; 206 AA.
AC P01277; G91410;
DT 21-JUL-1986 (Rel. 01, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Glucagon precursor [Contains: Glucicentin-related polypeptide (GRPP);
DE Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
DE (GLP2)]
OS Gallus gallus (Chicken), and
OS Melagris gallopavo (Common turkey).
CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; *

OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031, 9103;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM PANCREATIC).
RX SPECIES=Chicken; TISSUE=Pancreas;
RC MEDLINE=90249492; PubMed=2338135;
RA Hasegawa S., Terazono K., Nata K., Takada T., Yamamoto H.,
RA Okamoto H.;
RT "Nucleotide sequence determination of chicken glucagon precursor
RT cDNA. Chicken preproglucagon does not contain glucagon-like peptide
RT II.";
RL FEBS Lett. 264:117-120(1990).
RN [2]
RP SEQUENCE FROM N.A. (ISOFORM INTESTINAL).
RX SPECIES=Chicken; TISSUE=Intestinal mucosa;
RC MEDLINE=95295739; PubMed=7776976;
RA Irwin D.M., Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA
RT transcripts encoding glucagon-like peptide 2.";
RL Mol. Endocrinol. 9:267-277(1995).
RN [3]
RP SEQUENCE OF 55-83.
RX SPECIES=Chicken;
RC MEDLINE=76069271; PubMed=1194290;
RA Pollock H.G., Kimmel J.R.;
RT "Chicken glucagon. Isolation and amino acid sequence studies.";
RL J. Biol. Chem. 250:9377-9380(1975).
RN [4]
RP COMPOSITION, AND SEQUENCE OF 55-83.
RX SPECIES=M. gallopavo;
RC MEDLINE=73074118; PubMed=4645932;
RA Markussen J., Frandsen E.K., Heding L.G., Sundby F.;
RT "Turkey glucagon: crystallization, amino acid composition and
RT immunology.";
RL Horm. Metab. Res. 4:360-363(1972).
CC -1- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC THE BLOOD SUGAR LEVEL.
CC -1- ALTERNATIVE PRODUCTS:
CC Evenc-Alternative splicing; Named isoforms-2;
CC Name=Intestinal;
CC IsoId=P01277-1; Sequence=Displayed;
CC Name=Pancreatic;
CC IsoId=P01277-2; Sequence=VSP_001753, VSP_001754;
CC Note=Has been shown to exist only in chicken so far;
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN
CC RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION
CC -1- MISCELLANEOUS: THE COMPOSITION OF TURKEY GLUCAGON APPEARS TO BE
CC IDENTICAL WITH CHICKEN
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC -----
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CC -----
DR EMBL; Y07539; CA66827.1; .
DR EMBL; S78477; AB34506.1; .
DR PIR; I51301; I51301.
DR HSSP; P01274; IGCN.
DR InterPro; IPR00532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; Hormone; Cleavage on pair of basic residues; Signal;
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Anidation; Alternative splicing.
FT SIGNAL 1 22
FT PEPTIDE 23 52 GLICENTIN-RELATED POLYPEPTIDE.

DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Amidation; Alternative splicing
FT SIGNAL 1 20 BY SIMILARITY
FT PEPTIDE 21 50
FT PROPEP 33 81 GLUCONTIN-RELATED POLYPEPTIDE.
FT PROPEP 84 114
FT PROPEP 116 145
FT PROPEP 149 161
FT PEPTIDE 164 196
FT PROPEP 197 204
FT MOD_RES 145 145
FT VARSPPLIC 149 149
FT VARSPPLIC 150 204
FT SEQUENCE 204 AA; 23553 MW; B132EF346873B72 CRC64;

Query Match 88.4%; Score 137; DB 1; Length 204;
Best Local Similarity 83.3%; Pred. No. 2.6e-12;
Matches 25; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 HAEGTTSVSSYLEGQAKEFIANLVKGR 30
DB 116 HADGRYTDSISYLEGQAKEFIANLVNR 145

RESULT 11

GLUC_RANCA STANDARD; PRT; 103 AA.

AC P15438; P15439; P15440;
AT 01-APR-1990 (Rel. 14, Created)
DT 01-JUL-1993 (Rel. 26, Last sequence update)
DT 01-JUL-1993 (Rel. 26, Last annotation update)
DE Glucagon precursor (Fragments).
OS Rana catesbeiana (Bull frog).
OC Amphibia; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Enkaryota; Batrachia; Anura; Neobatrachia; Ranioidea; Rana.
RN NCBI_TaxID=6400;
RX [1]
RP SEQUENCE.

KC TISSUE=Pancreas;
RC MEDLINE=88257102; PubMed=3260236;
RA Pollock H.G.; Hamilton J.W.; Rouse J.B.; Ebner K.E.; Rawitch A.B.;
RT "Isolation of peptide hormones from the pancreas of the bullfrog
RT (Rana catesbeiana). Amino acid sequences of pancreatic polypeptide,
RT oxyntomodulin, and two glucagon-like peptides.";
RL J. Biol. Chem. 263:9746-9751(1988).
CC -I- FUNCTION: PROMOTES HYDROLYSIS OF GLUCOGEN AND LIPIDS, AND RAISES
CC THE BLOOD SUGAR LEVEL.
CC -I- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -I- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLGY WITH
CC OTHER SPECIES SEQUENCES.
CC -I- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC HSPSP; P01274; IGCN.
DR InterPro; IPR006532; Glucagon.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 3.
DR PROSITE; PS00260; GLUCAGON; 3.
KW Glucagon family; Hormone.
FT SIGNAL 1 20
FT PEPTIDE 21 36
FT PEPTIDE 39 70
FT NON_CONS 70 71
FT PEPTIDE 71 103
FT SEQUENCE 103 AA; 11719 MW; 316287B7BAE1C9F7 CRC64;

Query Match 83.2%; Score 129; DB 1; Length 103;
Best Local Similarity 76.7%; Pred. No. 1.8e-11;
Matches 23; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

7

Search completed: October 15, 2003, 10:53:39
Job time : 14.2787 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model
Run on: October 15, 2003, 10:48:32 ; Search time 59.0164 Seconds
131.177 Million cell updates/sec

Title: US-09-719-410-4
Perfect score: 135
Sequence: 1 HAEFTSDVSSYLEGQAQKEFIWLVKGR 30

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 830525 segs, 258052604 residues
Total number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: sp.archaea.*
2: sp.bacteria.*
3: sp.fungi.*
4: sp.human.*
5: sp.invertebrate.*
6: sp.mammal.*
7: sp.mnc.*
8: sp.organella.*
9: sp.phage.*
10: sp.plant.*
11: sp.podent.*
12: sp.virus.*
13: sp.vertibrate.*
14: sp.unclassified.*
15: sp.rvirus.*
16: sp.bacteriap.*
17: sp.archaeap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB ID	Description
1	155	100.0	176	6 Q8MJ25	Q8MJ25 oviv aries
2	155	100.0	180	6 Q95L60	Q95L60 canis fami
3	129	83.2	220	13 Q8UWL9	Q8UWL9 hapiobatr
4	118	75.1	72	13 Q91409	Q91409 oncorhynch
5	118	75.1	178	13 Q91971	Q91971 oncorhynch
6	113	72.9	178	13 Q91189	Q91189 oncorhynch
7	103	66.5	121	13 Q9DBE6	Q9DBE6 brachydant
8	90	58.1	96	13 Q9DG43	Q9DG43 ambloplites
9	61	39.4	130	11 Q9CVF1	Q9CVF1 mus musculu
10	61	39.4	144	11 Q9DB87	Q9DB87 mus musculu
11	60	38.7	170	6 Q8MI77	Q8MI77 bos taurus
12	59	38.1	171	11 Q9D227	Q9D227 mus musculu
13	59	38.1	389	2 Q931H2	Q931H2 wolincella s
14	54	34.8	172	13 Q9DE29	Q9DE29 brachydant
15	53.5	34.5	175	13 Q9DX24	Q9DX24 ictalurus p
16	52.5	33.9	427	17 Q8TLY0	Q8TLY0 methanosarc

Q8IU39 dugesia jap
Q8IU38 hydra magni
Q8IU37 sepioteuthi
Q8IU36 periplaneta
Q8AYP5 trachurus j
Q8AYP4 acipenser s
Q98SP4 oncorhynch
Q8BIT8 mus musculu
Q9PUF8 xenopus lae
Q88P5 oncorhynch
Q8SPJ3 methanosarc
Q9XXQ1 caenorhabdi
Q9NTW8 homo sapien
Q9UIX9 homo sapien
Q98TU3 brachydant
Q95X14 caenorhabdi
Q8XW49 talstonia s
Q9XFW9 cicer ariet
Q98SP6 aas platyr
Q98SP5 arabidopsi
Q8TLY5 salmoneila
Q18301 caenorhabdi
Q8IAC0 halocynthia
Q8QX5 methanosarc
Q25062 hydractinia
Q966F0 caenorhabdi
Q9N5B9 caenorhabdi
Q8WSP1 caenorhabdi
Q9N5B7 caenorhabdi

ALIGNMENTS

RESULT 1
Q8MJ25 PRELIMINARY; PRT; 176 AA.

AC Q8MJ25 01-OCT-2002 (TREMblrel. 22, Created)
DF 01-OCT-2002 (TREMblrel. 22, Last sequence update)
DT 01-MAR-2003 (TREMblrel. 23, Last annotation update)
DE Preproglucagon (Fragment).
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidea;
OC Bovidae; Caprinae; Ovis.
OX NCBI_TaxID:9940;
[1]
RN SEQUENCE FROM N.A.
RP TISSUE-Pancreas;
RA Limesand S.W., Hay W.W. Jr.;
RT "Characterization of the endocrine pancreas in an ovine placental
RL Insufficiency IUGR fetus."
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF529185; AAM94409.1; -
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 3.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUC; 3.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 176
SQ SEQUENCE 176 AA; 20335 MW; 13174039BD6CE2B3 CRC64;

Query Match 100.0%; Score 155; DB 6; Length 176;
Best Local Similarity 100.0%; Pred. NO. 1.5e-15;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 HAEFTSDVSSYLEGQAQKEFIWLVKGR 30
|||||

DB 98 HAEFTSDVSSYLEGQAQKEFIWLVKGR 127
|||||

RESULT 2

DR Pfam: PF00123; hormone2; 3.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM0070; GLUC; 3.
DR PROSITE: PS00260; GLUCAGON; 3.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Alternative splicing; Multigene family.
FT SIGNAL 1 ? POTENTIAL.
FT PEPTIDE ? 49 GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT PEPTIDE 52 80 GLUCAGON.
FT PEPTIDE 85 120 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 137 169 GLUCAGON-LIKE PEPTIDE 2.
FT VARSPLIC 124 178 MISSING (IN PANCREATIC ISOFORM).
SQ SEQUENCE 178 AA; 20034 MW; 5CF6980CF2A9D58E CRC64;

Query Match 76.18; Score 118; DB 13; Length 178;
Best Local Similarity 66.7%; Pred. No. 7.1e-10;
Matches 20; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGETSDVSYLGGQAAKEFIAMLVKGR 30
DB 90 HADGTYTSDVSYLQDQAARDFVSLKSGR 119

RESULT 6
Q91189 PRELIMINARY; PRT; 178 AA.
AC Q91189; Q92168;
DT 01-NOV-1996 (TREMELrel. 01, Created)
DT 01-NOV-1996 (TREMELrel. 01, Last sequence update)
DT 01-MAR-2003 (TREMELrel. 23, Last annotation update)
DE Glucagon II precursor.
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RN [1]
RP SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC TISSUE-DISTAL SMALL INTESTINE, AND PANCREAS;
RX MEDLINE=95295739; PubMed=7776976;
RA Irwin D.M., Wong J.;
RT "Trout and chicken proglucagon: alternative splicing generates mRNA transcripts encoding glucagon-like peptide 2.";
RL Mol. Endocrinol. 9:267-277(1995).
CC -1- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOCEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS: INTESTINAL (SHOWN HERE) AND PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC -1- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC -1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR EMBL: U19914; AAC59668.1; -;
DR EMBL: U19916; AAC60210.1; -;
DR EMBL: U19915; AAC60210.1; JOINED.
DR EMBL: U19915; AAC60209.1; -;
DR HSSP: P01274; IGCN.
DR Inter-Pro: IPR000532; Glucagon.
DR Pfam: PF00123; hormone2; 3.
DR SMART: SM0070; GLUC; 3.
DR PROSITE: PS00260; GLUCAGON; 2.
KW Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW Alternative splicing; Multigene family.
FT SIGNAL 1 ? POTENTIAL.
FT PEPTIDE ? 49 GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT PEPTIDE 52 80 GLUCAGON.
FT PEPTIDE 85 120 GLUCAGON-LIKE PEPTIDE 1.
FT PEPTIDE 137 169 GLUCAGON-LIKE PEPTIDE 2.
FT VARSPLIC 124 178 MISSING (IN PANCREATIC ISOFORM).
SQ SEQUENCE 178 AA; 19998 MW; E89D73866CD91C56 CRC64;

Query Match 72.98; Score 113; DB 13; Length 178;
Best Local Similarity 65.3%; Pred. No. 4.1e-09;
Matches 19; Conservative 7; Mismatches 3; Indels 0; Gaps 0;

QY 1 HAEGETSDVSYLGGQAAKEFIAMLVKGR 29
DB 90 HADGTYTSDVSYLQDQAARDFVSLKSG 118

RESULT 7
Q9DD86 PRELIMINARY; PRT; 121 AA.
AC Q9DD86;
DT 01-MAR-2001 (TREMELrel. 16, Created)
DT 01-MAR-2001 (TREMELrel. 16, Last sequence update)
DT 01-OCT-2002 (TREMELrel. 22, Last annotation update)
DE Glucagon polypeptide.
GN GCG Or Gld.
OS Brachydanio rerio (Zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
OX NCBI_TaxID=7955;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=99425190; PubMed=10495291;
RA Argenton F., Zecchin E., Bortolussi M.;
RT "Early appearance of pancreatic hormone-expressing cells in the zebrafish embryo.";
RL Mech. Dev. 87:217-221(1999).
DR EMBL: AJ133697; CAC20108.1; -;
DR HSSP: P01274; IGCN.
DR ZFIN: ZDB-GENE-010219-1; gcg.
DR Inter-Pro: IPR000532; Glucagon.
DR Pfam: PF00123; hormone2; 2.
DR PRINTS: PR00275; GLUCAGON.
DR SMART: SM00070; GLUC; 2.
DR PROSITE: PS00260; GLUCAGON; 2.
KW Polypeptide. 49 75 GLUCAGON.
FT CHAIN 88 121
SQ SEQUENCE 121 AA; 13537 MW; A85385F690DA180F CRC64;

Query Match 66.5%; Score 103; DB 13; Length 121;
Best Local Similarity 66.7%; Pred. No. 8.8e-08;
Matches 20; Conservative 5; Mismatches 5; Indels 0; Gaps 0;

QY 1 HAEGETSDVSYLGGQAAKEFIAMLVKGR 30
DB 88 HAEGETSDVSYLQDQAARDFVSLKSG 117

RESULT 8
Q9DG43 PRELIMINARY; PRT; 95 AA.
AC Q9DG43;
DT 01-MAR-2001 (TREMELrel. 16, Created)
DT 01-MAR-2001 (TREMELrel. 16, Last sequence update)
DT 01-OCT-2002 (TREMELrel. 22, Last annotation update)
DE Proglucagon (Fragment).
OS Ambloplites rupestris (Rock bass).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
OC Centrarchidae; Ambloplites.
OX NCBI_TaxID=109273;
RN [1]
RP SEQUENCE FROM N.A.
RA Al-Mahrouki A.A., Irwin D.M., Youson J.H.;
RT "Rock Bass proglucagon.";
RL Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF190499; AAG16778.1; -;
DR HSSP: P01274; IGCN.
DR Inter-Pro: IPR000532; Glucagon.
DR Pfam: PF00123; hormone2; 2.
DR PRINTS: PR00275; GLUCAGON.

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RESULT 10
Q9D887
ID AC Q9D887 PRELIMINARY; PRT; 144 AA.
IC Q9D887;
DT DT 01-JUN-2001 (TRENBLrel. 17, Created)
DT 01-JUN-2001 (TRENBLrel. 17, Last sequence update)
DT 01-DSC-2001 (TRENBLrel. 19, Last annotation update)
DE Gastric inhibitory polypeptide.
DI GIP.
DS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
ON NCBI_TaxID=10090;
RX [1]
SEQUENCE FROM N.A.
TS TISSUE=Small intestine;
ST STRAIN=C57BL/6J; PubMed=11217851;
MD MEDLINE=21083660; PubMed=11217851;
RA Kawai J., Shiragawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda N., Gaasterland T., Gissi C., King B., Koichi H.,
RA Flaischmann W., Gaasterland T., Gissi C., King B., Koichi H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaudo I., Pesole G., Quackenbush J.,
RA Schrim L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seys T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilmink L.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa I., Hasegawa I., Kotsuki S.,
RA Hayashizaki I.;
RT Functional annotation of a full-length mouse cDNA collection.*;
RL Nature 409:685-690(2001).
DR EMBL; AK008308; BAB25592.1; -
DR HSSP; P01274; IGCN
DR MSP; MG1:107504; GIP.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 1.
DR SMART; SM00070; GLUC; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
SQ SEQUENCE 144 AA; 16389 MW; 365618665DADA8C3 CRC64;

Query Match 39.4%; Score 61; DR 11; Length 144;
Best Local Similarity 40.4%; Pred No. 0, 29;
Matches 12; Conservative 7; Mismatches 11; Indels 0; Gaps

Q7 1 HAEQFTTSVSYLEGQAKEPTIANLYKGR 30
Db 44 YAEIGFTTSYDSTAMDKIQDFVNNVLKGR 73

RESULT 11
Q8M177
ID AC Q8M177 PRELIMINARY; PRT; 170 AA.
IC Q8M177;
DT DT 01-OCT-2002 (TRENBLrel. 22, Created)
DT 01-OCT-2002 (TRENBLrel. 22, Last sequence update)
DT 01-MAR-2003 (TRENBLrel. 23, Last annotation update)
DE Vasoactive intestinal polypeptide precursor.
DI Pcs taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Ruminantia; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
ON NCBI_TaxID=9913;
RX [1]
SEQUENCE FROM N.A.
MD MEDLINE=22092342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Biden L.E.;

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Matches 13; Conservative 6; Mismatches 11; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVKGR 30
 ID Q93IH2 PRELIMINARY; PRT; 389 AA.
 AC Q93IH2;
 DT 01-DEC-2001 (TrEMBLrel. 19, Created)
 DDT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
 DE 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DDE SULfur transferase precursor.
 DDE STRA.
 OS Wolinella succinogenes.
 OC Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacteriales;
 OX Helicobacteraceae; Wolinella.
 NCBI_TaxID=844;
 RN [1]
 RP SEQUENCE FROM N.A.
 RZ Schneider P.V., Simon J., Klimmek O.;
 RT "The sulfur transferase of Wolinella succinogenes.";
 RL Submitted (Aug-2001) to the EMBL/Genbank/DBJ databases.
 RLU ENIG; AJ318789; CAC50085.1; -
 DR InterPro; IPR001763; Rhodanese-like.
 DR Pfam; PF00581; Rhodanese; 2.
 DR SMART; SM00450; RHOD; 3.
 DR KX Signal; Transferase.
 FW SIGNAL
 FT CHAIN 1 21. POTENTIAL.
 FT CHAIN 22 389. SULFUR TRANSFERASE.
 SQ SEQUENCE 389 AA; 41949 MW; 6C80850CAD9C4B9C CRC64;

Query Match 38.1%; Score 59; DB 2; Length 389;
 Best Local Similarity 39.3%; Pred. No. 1.9;
 Matches 11; Conservative 8; Mismatches 9; Indels 0; Gaps 0;

QY 1 HAEGTFTSDVSSYLEGQAAKEFIAMLVK 28
 ID Q93IH2 PRELIMINARY; PRT; 172 AA.
 AC Q93IH2;
 DT 01-MAR-2001 (TrEMBLrel. 16, Created)
 DDT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
 DE 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DDE Growth hormone-releasing hormone/pituitary adenylate cyclase-
 DDE activating polypeptide.
 DDE GN ADCVAP1.
 OS Brachydanio rerio (Zebrafish) (Danio rerio).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
 OC Cyprinidae; Danio.
 NCBI_TaxID=7955;
 RN [1]
 RP SEQUENCE FROM N.A.
 RZ Fradinger E.A., Sherwood N.M.;
 RT "Characterization of the gene encoding both growth hormone-releasing
 RT hormone (GRF) and pituitary adenylate cyclase-activating polypeptide
 RT (PACAP) in the zebrafish.";
 RL Submitted (DEC-1999) to the EMBL/Genbank/DBJ databases.
 DR ENIG; AF217251; AAG36782.1; -
 DR ZFIN; ZDB-GENE-020809-4; adcyap1.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; hormone2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUC; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT CHAIN 81 125. GROWTH HORMONE-RELEASING HORMONE.

